# The Forum.

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## THE GOVERNMENT OF AMERICAN CITIES.

WITHOUT the slightest exaggeration we may assert that, with very few exceptions, the city governments of the United States are the worst in Christendom—the most expensive, the most inefficient, and the most corrupt. No one who has any considerable knowledge of our own country and of other countries can deny this.

Among our greater municipalities, we naturally look first at New York and Philadelphia. Both are admirably situated; each stands on rising ground with water on both sides; each is happy in position, in climate, in all advantages to be desired by a great metropolis. In each, what is done by individuals is generally well done and sometimes splendidly done; and in each, what is due from the corporate authorities, in matters the most essential to a proper city government, is either wretchedly done or left utterly undone. One has but to walk along the streets of these and other great American cities, to notice at once that some evil principle is at work. Everywhere are wretched wharves, foul docks, inadequate streets, and inefficient systems of sewerage, paving, and lighting. Pavements which were fairly good at the beginning, have been taken up and replaced with utter carelessness, and have been prematurely worn out or ruined. The stranger, seeking to find his way in the first of

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these great cities, is guided by few signs giving the names of streets; in the most frequented quarters there are generally none at all. Obstacles of all sorts are allowed; tangled networks of wires frequently exist in such masses overhead as to prevent access to buildings in case of fire, and almost to cut off the rays of the sun. Here and there corporations or private persons have been allowed to use the streets in such manner as to close them to the general public. In wet weather many of the most important thoroughfares are covered with reeking mud; in dry weather this mud, reduced to an impalpable dust containing the germs of almost every disease, is blown into the houses and into the nostrils of the citizens.

The city halls of these larger towns are the acknowledged centers of the vilest corruption. They are absolutely demoralizing, not merely to those who live under their sway, but to the country at large. Such cities, like the decaying spots on ripe fruit, tend to corrupt the whole body politic. As a rule, the men who sit in the councils of our larger cities, dispensing comfort or discomfort, justice or injustice, beauty or deformity, health or disease, to this and to future generations, are men who in no other country would think of aspiring to such positions. Some of them, indeed, would think themselves lucky in keeping outside the prisons. Officials intrusted with the expenditure of the vast wealth of our citizens are frequently men whom no one would think of intrusting with the management of his private affairs, or, indeed, of employing in any capacity. Few have gained their positions by fitness or by public service; many have gained them by scoundrelism; some by crime. To give examples of the legislation which is the outcome of this system in any single city, would take more than a score of articles; I will, then, refer only to one or two matters within my own experience.

I happen to know directly something of city management. During four years I was a member of the committee of the Senate of the State of New York which had to do with municipal affairs, and during part of that time was a member of a special committee of investigation into sundry departments of our great commercial metropolis. In this latter capacity my duty was to investigate especially the provisions for public health in that

city. Never was there a stranger mixture of tragedy and farce. We found that all the arrangements for guarding the public health, not only of the city, but of the vast States between which and the whole outer world it is the main gateway, were intrusted not merely to schemers and intriguers of the lowest type, not merely to men without any of the special knowledge required in the discharge of their duties, but frequently to men so illiterate that they were shut out from the ordinary avenues to such knowledge. From one end to the other was corruption and inefficiency. The result was that in large blocks in various parts of the city, typhoid, small pox, and various other diseases were ever present. The party manager at the head of this system attempted to beat off the attack upon him and upon the organization he represented, by bringing before the committee the best examples he could find of his subordinate "health wardens" and "sanitary inspectors." He had evidently cleaned them and dressed them for the occasion; but unfortunately he could not at short notice give them the instruction necessary to answer the simplest questions. The majority of them were keepers of small corner dram shops; many of them were owners of tenement houses in which these dram shops were situated—tenement houses from which typhoid fever was hardly ever absent. They were obliged to confess that frequently pools of festering sewage lay in the midst of these densely-populated centers, and the ignorance they showed regarding the simplest things they should have known would have been ludicrous had it not implied so fearful a series of tragedies. One episode may serve as an example. One of these "sanitary inspectors" being called before the committee, the following dialogue occurred:

**"Mr. Inspector, did you have a case of small pox in your ward at such a time?"**

**"Yes, sir."**

**"Did you visit the sick people?"**

**"I didn't."**

**"Why did you not visit them?"**

**"For the same reason that you wouldn't; I didn't wish to get it myself."**

**"Did the family go entirely without care?"**

**"No; they were hyjinnicks [hygienics]."**

**"What do you mean by 'hyjinnicks'?"**

**"I mean people who doctor themselves."**

This furnished a test for the various "health wardens" and "sanitary inspectors" who were brought in afterward; and each of them was generally asked, "Have you any hyjinnicks in your ward?" Some of these guardians of the public health answered that they had, some replied that they had not, some said that people "had them pretty bad," and some averred that people in their ward got over them pretty easily. At last one of them was asked, "Witness, do you know what the word 'hyjinnicks' means?" "Yes, sir." "What does it mean?" "It means the bad smell rising from standing water." Our committee, in spite of great opposition, did indeed sweep this system out of existence, and bring in a better; but a vast mass of corruption and misery was left, as the investigations of succeeding years have amply shown. Our effort was made more than twenty years ago, and nearly every year since has shown new forms of municipal corruption nearly or quite as bad.

It has been my lot also to have much to do with two interior American cities of less size—one of about 100,000 inhabitants, the other of about 12,000. In the former of these I saw a franchise for which a million of dollars could easily have been obtained, given away by the Common Council. I saw a body of the most honored men in the State go before that Council to plead for ordinary justice and decency. I saw the chief judge of the highest court of the State, one of his associate judges, a circuit judge of the United States, an honored member of Congress, two bishops, the president and professors of a university, and a great body of respected citizens urge this Common Council not to allow a railway corporation to block up the entrance to the ward in which the petitioners lived and to occupy the main streets of the city. They asked that, if it were allowed to do so, it might be required, in the interest of human life, either to raise its tracks above the streets or to protect the citizens by watchmen and gateways, and to pay a fair sum for the privilege of cutting through the heart of a populous city. All was utterly in vain. I saw that Common Council, by an almost unanimous vote, pass a bill giving away to this great corporation all this franchise for nothing, so far as the public knew, and without even a requirement to protect the crossings of the most import-

ant streets; and I soon afterward stood by the mutilated body of one of the noblest of women, beheaded at one of these unprotected street crossings while on an errand of mercy. So, too, in the smaller of these two interior cities, while the sewerage and the streets were in such bad condition as to demand the immediate attention of the Common Council, I saw the consideration of these interests neglected for months, and the main attention of the Council given to a struggle over the appointment of a cemetery-keeper at a salary of ten dollars a week.

All who know anything of American cities, know that these cases are typical. The loss in money is bad; the loss in public health is worse; but worst of all is the loss of character—the corruption and servility thus engendered. This is all the more unfortunate because the city population is so rapidly increasing in comparison with the population of the rural districts. The despotism of bosses seems on the increase; the abject servility of the great mass of citizens seems also on the increase. Now and then, indeed, comes an attack on the men in power, and occasionally something is thus accomplished; but the old order of things returns, for the system itself is vicious. It is the evil tree which must needs bring forth corrupt fruit.

No fair man acquainted with city affairs will charge me with overcoloring this picture. About a year since, I stood upon the wharves and in the streets of Constantinople. I had passed from one end of Europe to the other; these were the worst I had seen since I left home, and a spasm of homesickness came over me. During all my residence in foreign cities, never before had the remembrance of New York, Philadelphia, and other American towns been so vividly brought back to me. There in Constantinople, as the result of Turkish despotism, was the same hap-hazard, careless, dirty, corrupt system which we in America know so well as the result of mob despotism; the same tumble-down wharves, the same sewage in the docks, the same "pavements fanged with murderous stones," the same filth, the same obstacles to travel and to traffic.

I have claimed some knowledge of American cities; I may claim also some knowledge of foreign cities. At various times it has been my lot to sojourn in nearly every one of the greater

European municipalities, from Edinburgh to Athens, from St. Petersburg to Naples, from Paris to Buda-Pesth. I will not mince matters; I am willing to incur the suspicion of a want of patriotism in telling the truth. In every respect for which a city exists, they are vastly superior to our own. Very recently I have passed through several of them, remaining in some of them during periods of from three weeks to three months, and I will state, as briefly as possible, some of the facts which were forced upon me as bearing upon the question now before us.

Take first, as a type of administration in a great metropolitan city, the municipal system of Paris. During the Summer of 1889 this system could be studied under special advantages. First, there was the city itself, with its perfect management above ground—every street well paved, well kept, and constantly well cleansed; every house in good repair; all lines of communication carefully studied; all obstacles removed; the system of illumination so perfect that in every important street one could read a newspaper at night; the names of all streets neatly placarded at street corners; no electric wires in sight; no buildings pushed up to such a height as to cast a shade over whole quarters of the city, and thus to depress the public health; no steam boilers in places where they could by any possibility do injury. Underground the system was even more striking—the sewerage as perfect as the resources of science could make it; subterranean railways and canals conducting the city's refuse to remote districts, where it becomes a blessing rather than a curse; and all these underground channels so well kept that ladies in their walking dresses traveled miles through them without the slightest discomfort.

During that Summer of the Exposition a great increase in the number of electric lights, telephones, and the like, rendered necessary new electric cables; but instead of bribing and counter bribing in the Common Council, instead of injunctions and counter injunctions in the courts, instead of charges and counter charges in the newspapers, instead of votes by aldermen and vetoes by mayors, instead of sensational descriptions of men killed here and horses killed there, instead of the sudden cutting down of great masses of wires and the reckless stoppage of com-

munication and illumination in whole districts, instead of great trenches in frequented streets kept open for weeks by aldermanic battles and judicial proceedings, the best scientific advice was taken, trenches were rapidly made, long lines of conductors were speedily laid and neatly insulated without disturbance of any kind, and this whole internal system of electric communication and electric lighting was made perfectly invisible. I have said that it was done scientifically. In our great metropolis, to grapple with a similar question, the Governor of the State appointed three commissioners, no one of them having a particle of scientific or technical knowledge, no one of them having any standing in the community, to fit him for so important a trust; but in Paris the whole matter was put into the hands of competent persons, and it was decided upon and executed quietly, speedily, and effectually. The same admirable system of administration is seen in the public buildings of Paris. The new city hall is one of the most splendid edifices in existence—a masterpiece of architecture, adorned with masterpieces of sculpture and painting, and with every sort of art workmanship in marble, bronze, iron, and wood, each done by the best of trained artists, and all in such manner that every Frenchman is proud of them as adding to the glories of his country.

Still another example is seen in the new buildings of the Sorbonne. The city determined to have this one of its colleges for higher instruction fully worthy of it. It was my good fortune to be present when its great hall—the finest academic structure of the kind in existence—was opened by the President of the French Republic, his ministers, members of the French Academy and Institute, and delegates from most of the leading universities in the world. Twenty-two millions of francs was the sum appropriated for the whole series of buildings, and far more satisfactory results have already been obtained with the expenditure of perhaps a quarter of this sum than the State of New York has obtained with an outlay of nearly $20,000,000 at its State Capitol. Here, too, the foremost artists of their time have done their best work under commissions from the city authorities. A great, inspiring, allegorical picture by Puvis de Chavannes glorifies one side of the vast auditorium; a series of

frescoes by painters of European reputation, giving the history of French art, science, and literature, adorns the walls of the adjoining halls; about the semicircular theater are colossal sitting statues of the great men connected with the institution, from Robert of Sorbon to Cardinal Richelieu, and from Richelieu to Cuvier; wrought into the wide-spreading dome are the names of men who, in science, literature, and art, have given renown to the college and to the city of Paris. All these combine to lift the beholder into the realm of what is highest in thought and action. All is of the best, and the most bitter opposition journals never lisped a charge of jobbery against any human being connected with any of these great enterprises. Imagine anything of this kind done by the common council of any American city! Fancy any board of aldermen in our own country intrusted with the erection of such buildings, with the ordering of masterpieces to adorn them, and with the choice of architects, sculptors, and painters whose works should be sources of patriotic pride for centuries! It requires a stretch of the imagination of which we are incapable.

But there was another special means of studying the administration of that city. Upon the grounds of the International Exposition were two great edifices erected by the city authorities to explain to the world their whole system of municipal administration. In them were exhibited maps, plans, photographs, models—everything necessary to show the whole vast system of street construction, sewer construction, water storage and supply, gas and electrical supplies, municipal halls, galleries, schools, markets, slaughter houses, lavatories, and laboratories for testing various products, to secure the health and security of the community. There, too, were cartoons and casts representing the master works of painting and sculpture which, during several years past, had been ordered by the city authorities for the various public buildings, from the edifices occupied by the councils and mayors of the different wards up to the city hall, and from the ward schools up to the Sorbonne. It was inspiring to think that a city could thus be administered under a republic, and yet an American had other emotions than admiration as he viewed these things. I talked with an eminent

professor from one of our leading American institutions for technical instruction, who had just come from this special exposition of the city of Paris. He said: "During the first hour I was filled with amazement and delight at the sight of such perfection in administration; during the next three hours I was filled with sadness and disgust, as I thought how these problems are solved in our American cities."

I might say something also of the way in which the French government and the city of Paris quietly developed the most magnificent exposition of the world's finest products ever seen, and I might compare it with the way in which our own greatest city took up a similar subject and wrecked it upon city politics, and the way in which another American city is grappling with it now. But I pass to another country, and take next the city of Berlin, which also I have been enabled to watch with some care; first as a student more than thirty years ago, secondly at various visits, and thirdly during an official residence of nearly three years. When I first knew the city, it contained about 500,000 inhabitants, which was about the population of the city of New York; when I last knew it, it contained about 1,100,000 inhabitants, which was also about the population of the city of New York at the same time. During the intervening time, then, the two cities had increased at about the same rate. But, unlike New York, Berlin is not at all fortunate in its situation. It was founded in the midst of a sandy plain, whose surface is only a few feet above the sluggish waters of the little river Spree. Drainage was extremely difficult; the water supply was hard to obtain; good materials for building and paving were very remote. Within the last forty years it has grown from a large village to a great city; it has erected a city hall which is one of the architectural glories of Europe, and has adorned it outside and inside with works of art in which every citizen takes legitimate pride. Paving, drainage, street-numbering, water supply, gas supply, electrical supply, have all been admirably provided for; public comfort and public health have been most carefully guarded; splendid works of art have been placed in various parts of the city; public buildings on an imposing scale have been erected; new thoroughfares have been opened; parks have been laid out;

systems of rapid transit have been provided. As the seat of government, Berlin has sometimes felt obliged to spend large sums in public festivities, and in welcoming victorious armies and renowned guests; and yet, to-day, the entire expenditure for maintaining the city is, dollar for dollar, almost exactly the amount which is required to pay the interest of the public debt alone of the city of New York.

I might allude to a number of other cities—to the things done in the city of London; to the great Thames embankment, with its colossal frontage in granite and its tunnels for sewage; to the opening of long and wide arteries of communication; to the building up of vast new quarters; to the laying of electric wires underground as speedily and as safely as at Paris. There has, indeed, been some grumbling, and not long since an entire change of system took place; but anything like the iniquity of our city systems is there unknown. The mere participation of one or two men of municipal note in a piece of jobbery which in most of our American cities would have been thought too mild for notice, was considered so crying a scandal that it overturned the old system and led to the establishment of that under which the city is now conducted.

Objectors may say that one of these cities is in a monarchical country; though as a matter of fact, both England and France are to-day constitutional republics. In order, therefore, to dismiss all cavil, I will pass to a smaller city in a country whose republicanism cannot be doubted—the city of Zurich. Including its suburbs, it contains about 80,000 inhabitants. Not only are its sewerage, and its water, gas, and electrical supplies well cared for; not only has it beautifully-ordered quays, parks, and everything which ministers to public comfort and enjoyment; but it has, in these latter days, completed an entire transformation of its main interior district. It has built long streets, lined with noble edifices; it has pushed out into the lake extensive quays, partly for commercial purposes and partly as beautiful public resorts; it has a fine gallery of art, an important historical museum, a great public library, one of the most attractive universities in Europe, and a school of technology with a chemical laboratory larger than any in the United States. All are cared

for by the people and for the people; everything is tidy, neat, beautiful, and with no suspicion of jobbery.

I have spoken of the quays of London and of Zurich, and might have referred to those of many other cities. I speak on this subject feelingly. Eight times have I approached our shores upon the deck of a transatlantic steamer, and each time I have felt my love of country and my national pride return more strongly than ever on entering New York harbor—one of the most beautiful in the world. Nor was this feeling wrecked at my last entrance, when our ship struck a bank of mud in the harbor, evidently due to the greed of contractors paid to deposit the sweepings of the city far out in the ocean. On entering New York harbor, an American naturally loves to call the attention of the foreign traveler to the glory and the beauty of the scene around him; but as he approaches the wharves he feels like getting into his berth and remaining there until every Englishman, every Frenchman, every German, every Italian, has left the ship. For the wharves of New York, simply as a matter of fact, are the most wretched in Christendom. One week a ship leaves the splendid stone wharves of Liverpool, Southampton, Cherbourg, Havre, Bremerhaven, or Hamburg; the next week it comes to anchor at New York in a dock which is a puddle of sewage, between wharves built of logs and covered with flimsy constructions of wood likely at any moment to be the sport of fire. Yet no better water fronts exist in the civilized world than those in our great metropolitan city, and very few, if any, are so good. Arrived on shore, the visitor finds himself the prey of extortion of every sort; forbidden indeed by the city laws, but connived at by the city officials.

I am aware that at this moment I stand at a great disadvantage with the vast majority of my readers. They consider me unpatriotic, pessimistic; I am neither one nor the other. I love my country, and this truth-telling is prompted by love of country. After those who will rise against me, in this matter, have ended their denunciations, they will find, if they will examine a little and think a little, that I have understated the truth rather than overstated it.

And now, what is the cause of this difference between muni-

cipalities in the old world and in the new? I do not allow that their populations are better than ours. What accounts, then, for the better municipal development in their case and for the miserable results in our own? My answer is this: we are attempting to govern our cities upon a theory which has never been found to work practically in any part of the world. Various forms of it were tried in the great cities of antiquity and of the middle ages, especially in the mediæval republics of Italy, and without exception they ended in tyranny, confiscation, and bloodshed. The same theory has produced the worst results in various countries of modern Europe, down to a recent period.

What is this evil theory? It is simply that the city is a political body; that its interior affairs have to do with national political parties and issues. My fundamental contention is that a city is a corporation; that as a city it has nothing whatever to do with general political interests; that party political names and duties are utterly out of place there. The questions in a city are not political questions. They have reference to the laying out of streets; to the erection of buildings; to sanitary arrangements, sewerage, water supply, gas supply, electrical supply; to the control of franchises and the like; and to provisions for the public health and comfort in parks, boulevards, libraries, and museums. The work of a city being the creation and control of the city property, it should logically be managed as a piece of property by those who have created it, who have a title to it, or a real substantial part in it, and who can therefore feel strongly their duty to it. Under our theory that a city is a political body, a crowd of illiterate peasants, freshly raked in from Irish bogs, or Bohemian mines, or Italian robber nests, may exercise virtual control. How such men govern cities, we know too well; as a rule they are not alive even to their own most direct interests. I have referred to the work of a legislative committee in supplanting the old murderous system in New York City by the new health board; it fell to my lot to present the report and to take the lead in urging this reform in the Senate of the State. I was successful; and yet had I been recognized, at any time within many months, in the tenement houses where the men, women, and children lived whose lives had thus been

saved, my own life would not have been worth an hour's purchase, so bitter was the feeling of these people in behalf of the political managers who were murdering them, and against those who saved them.

The difference between foreign cities and ours, is that all these well-ordered cities in England, France, Germany, Italy, Switzerland, whether in monarchies or republics, accept this principle—that cities are corporations and not political bodies; that they are not concerned with matters of national policy; that national parties as such have nothing whatever to do with city questions. They base their city governments upon ascertained facts regarding human nature, and upon right reason. They try to conduct them upon the principles observed by honest and energetic men in business affairs. We, on the other hand, are putting ourselves upon a basis which has always failed and will always fail—the idea that a city is a political body, and therefore that it is to be ruled, in the long run, by a city proletariat mob, obeying national party cries.

What is our safety? The reader may possibly expect me, in logical consonance with the statement I have just made, to recommend that the city be treated strictly as a corporate body, and governed entirely by those who have a direct pecuniary interest in it. If so, he is mistaken. I am no doctrinaire; politics cannot be bent completely to logic—certainly not all at once. A wise, statesmanlike view would indicate a compromise between the political idea and the corporate idea. I would not break away entirely from the past, but I would build a better future upon what we may preserve from the past.

To this end I would still leave in existence the theory that the city is a political body, as regards the election of the mayor and common council. I would elect the mayor by the votes of the majority of all the citizens, as at present; I would elect the common council by a majority of all the votes of all the citizens; but instead of electing its members from the wards as at present—so that wards largely controlled by thieves and robbers can send thieves and robbers, and so that men who can carry their ward can control the city—I would elect the board of aldermen on a general ticket, just as the mayor is elected now,

thus requiring candidates for the board to have a city reputation. So much for retaining the idea of the city as a political body. In addition to this, in consideration of the fact that the city is a corporation, I would have those owning property in it properly recognized. I would leave to them, and to them alone, the election of a board of control, without whose permission no franchise should be granted and no expenditure should be made. This should be the rule, but to this rule I am inclined to make one exception; I would allow the votes of the board of control, as regards expenditures for primary education, to be overridden by a two-thirds majority of the board of aldermen. I should do this because here alone does the city policy come into direct relations with the general political system of the nation at large. The main argument for the existence of our public schools is that they are an absolute necessity to the existence of our Republic; that without preliminary education a republic simply becomes an illiterate mob; that if illiterate elements control, the destruction of the Republic is sure. On this ground, considering the public-school system as based upon a national political necessity, I would have an exception made regarding the expenditures for it, leaving in this matter a last resort to the political assembly of the people.

A theory resulting in a system virtually like this, has made the cities of Europe, whether in monarchies or republics, what they are, and has made it an honor in many foreign countries for the foremost citizens to serve in the common councils of their cities. Take one example: It has been my good fortune to know well Rudolf Von Gneist, councilor of the German Empire. My acquaintance with him began when it was my official duty to present to him a testimonial, in behalf of the government of the United States, for his services in settling the north-west boundary between the United States and Great Britain. The Emperor William was the nominal umpire; he made Von Gneist the real umpire—that shows Von Gneist's standing. He is also a leading professor of law in the University of Berlin, a member of the Imperial Parliament and of the Prussian Legislature, and the author of famous books, not only upon law, but upon the constitutional history of Germany and of England. This man has

been, during a considerable time, a member of what we should call the board of aldermen of the city of Berlin, and he is proud to serve in that position. With him have been associated other men the most honored in various walks of life, and among these some of the greatest business men, renowned in all lands for their enterprise and their probity. Look through the councils of our cities, using any microscope you can find, and tell me how many such men you discern in them. Under the system I propose, it is, humanly speaking, certain that these better men would seek entrance into our city councils. Especially would this be the case if our citizens should, by and by, learn that it is better to have in the common council an honest man, though a Republican, than a scoundrel, though a Democrat; and better to have a man of ability and civic pride, though a Democrat, than a weak, yielding creature, though a Republican.

Some objections will be made. It will be said, first, that wealthy and well-to-do people do not do their duty in city matters; that if they should, they would have better city government. This is true to this extent, that even well-to-do men are in city politics strangely led away from their civic duties by fancied allegiance to national party men and party issues. But in other respects it is untrue; the vote of a single tenement house, managed by a professional politician, will neutralize the vote of an entire street of well-to-do citizens. Men in business soon find this out; they soon find that to work for political improvement under the present system is time and labor and self-respect thrown away. It may be also said that the proposal is impracticable. I ask, why? History does not show it to be impracticable; for we have before us, as I have shown, the practice of all other great civilized nations on earth, and especially of our principal sister republics.

But it will be said that "revolutions do not go backward." They did go backward in the great cities of Europe when these rid themselves of the old bad system that had at bottom the theory under which ours are managed, and when they entered into their new and better system. The same objection, that revolutions do not go backward, was made against any reform in the tenure of office of the governor and of the higher judiciary in

the State of New York; and yet the revolution did go backward, that is, it went back out of doctrinaire folly into sound, substantial, common-sense statesmanship. In 1847 the State of New York so broke away from the old conservative moorings as to make all judgeships elective, with short terms, small pay, and wretched accommodations, and the same plan was pursued as regards the governor and other leading officials; but the State, some years since, very wisely went back to much of its former system—in short, made a revolution backward, if any one chooses to call it so—resuming the far better system of giving our governor and higher judges longer terms, larger salaries, better accommodations, and dignified surroundings. We see, then, that it is not true that steps in a wrong direction in a republic cannot be retraced. As they have been retraced in State affairs, so they may be in municipal affairs.

But it will be said that this change in city government involves a long struggle. It may or it may not. If it does, such a struggle is but part of that price which we pay for the maintenance of free institutions in town, State, and nation. For this struggle, I especially urge all men of light and leading to prepare themselves. As to the public at large, what is most needed in regard to municipal affairs, as in regard to public affairs generally, is the quiet, steady evolution of a knowledge of truth and of proper action in view of it. That truth, as regards city government, is simply the truth that municipal affairs are not political; that political parties as such have nothing to do with cities; that the men who import political considerations into municipal management are to be opposed. This being the case, the adoption of some such system as that which I have sketched would seem likely to prove fruitful of good.

ANDREW D. WHITE.

## FORMATIVE INFLUENCES.

I AM informed that this paper is to be one of a series, in which various men and women have been invited to speak on the persons, the circumstances, and the books which have contributed to determine their characters and occupations. If such papers were designed to stimulate the curiosity of many to know all the personal details in the lives of their neighbors, I should on every ground have declined to be of the number of those who will contribute to the series. I have never had the least inclination to indulge the feeling of egotism by writing the autobiography of a life uneventful in itself, and of little importance to the world. But such papers may conceivably have a higher interest than could arise from the gossip of personality. If any one, however insignificant, speaks of influences which have been helpful to himself, he may haply point out some sources of advantage to others. Although, therefore, I may seem to be speaking about myself, I do so only as one of the multitude, of whom each may say, "*Homo sum; humani nihil a me alienum puto.*"

First among the influences which have formed my life, I must mention the character of a mother who has been dead for nearly thirty years, but of whom my reminiscences are as vivid and as tender as if she had passed away but yesterday. I have never spoken of her, though I dedicated one early book to her dear memory. She has had no memorial in the world; she passed her life in the deep valley of poverty, obscurity, and trial; but she has left to her only surviving son the recollections of a saint. I may say of her, with truth, that she was canonized by all who looked on her, and I can echo with all my heart the words of the poet laureate:

> "Happy he
> With such a mother! faith in womankind
> Beats with his blood, and trust in all things high
> Comes easy to him."

In childhood, indeed, I was deprived of the inestimable advantage of her influence during the most impressionable years of life. Nevertheless, I recall with gratitude that for some years I was the close daily witness of a character in which I never saw the least stain of anything unworthy. My mother's habit was every day, immediately after breakfast, to withdraw for an hour to her own room, and to spend that hour in reading the Bible, in meditation, and in prayer. From that hour, as from a pure fountain, she drew the strength and the sweetness which enabled her to fulfill all her duties, and to remain unruffled by all the worries and pettinesses which are so often the intolerable trial of narrow neighborhoods. As I think of her life, and of all it had to bear, I see the absolute triumph of Christian grace in the lovely ideal of a Christian lady. I never saw her temper disturbed; I never heard her speak one word of anger, or of calumny, or of idle gossip; I never observed in her any sign of a single sentiment misbecoming to a soul which had drunk of the river of the water of life, and which had fed upon manna in the barren wilderness. The world is the better for the passage of such souls across its surface. They may seem to be as much forgotten as the drops of rain which fall into the barren sea, but each rain drop adds to the volume of refreshful and purifying waters

> "The healing of the world
> Is in its nameless saints. A single star
> Seems nothing, but a thousand scattered stars
> Break up the night, and make it beautiful."

Another formative influence upon my life lay in the fact that as a boy I was not sent to one of the great English public schools, but to one which is comparatively unknown, although several men were trained there who are now playing a considerable part in the world. That school was King William's College, at Castletown, on the Isle of Man. I have sketched the natural surroundings of the school, and many little incidents of its daily life, in the first book I wrote—"Eric, or Little by Little." Accident made me an author. The proposal to write a book on school life came unsought, and I naturally found in my own reminiscences the colors in which I had to work. That little story was written very rapidly, and betrays on every page the

writer's ignorance of the world. I never supposed that it would survive for more than a year; but in this, the thirty-second year after its first appearance, the twenty-sixth edition has been published, and new editions are still demanded. I suppose that the vitality of the book is due to its sincerity. It was certainly written with the one desire to do good, and that it has done good I have the evidence derivable from scores of letters written to me by strangers from all regions of the world. The scenery and surroundings of the story were taken from the Manx school, although the adventures of the boys in the tale did not in the slightest degree resemble my own.

Two voices I heard at school continually for seven years—the voice of the mountains and that of the sea. I believe that they kindled in me the love for nature, which I have felt with almost passionate strength from very early years. I can say only that, even as a young boy, I met with few troubles which were not lightened, if not removed, by a walk along the shore; and that no hours of my life have been happier than those spent on sands or cliffs. And certainly this love of nature has been with me a formative influence. In the beauty of things seen—their superfluous and supererogatory beauty, so to speak—I have always recognized an irrefragable outward evidence, not only of the personality of God but of his love; and on the shifting waves of life that conviction is of incomparable preciousness as an anchor of the soul, sure and steadfast.

At King William's College I spent the years between eight and sixteen. For three years more I was a student at King's College, London. When I was in London I used frequently to walk with my only brother, who is now dead, to hear the most celebrated preachers. In that way I heard Canon Melville, Canon Dale, Canon Stowell, Dr. Croly, Dr. McNeile, Bishop Wilberforce, Bishop Hampden, Dean Close, and many more. I have listened to many eloquent, many striking, many admirable sermons; and in spite of the fashion of sneering at sermons which prevails among intellectual cliques, I am sure that, numberless as may be the imperfections of all except the greatest discourses, the cause of religion and of morality would lose infinitely by their suppression. A sand grain is insignificant; but each sand

grain in turn flames into splendor when it catches the sunbeam, and though they are so light that they may be carried away by the wings of the wind, yet in their combined strength they form a barrier against the fury of the sea. I have forgotten, I suppose, some five or six thousand sermons—forgotten all about them so completely that they have not left a trace in my memory, though at the time they may have had their infinitesimal influence for good on the life of every day. But of the remainder there were some which left deeper and indeed lifelong impressions. I may single out four; three which I heard, one which I read immediately after its delivery. Of one of them, heard when I was a boy of fourteen, I remember nothing but the manner in which, for all time, it impressed the text itself upon my recollection. That text was, "As the grass growing upon the housetops, which withereth afore it be plucked up, whereof the mower filleth not his hand, neither he that bindeth up the sheaves his bosom." Perhaps a sermon can produce no better effect than to burn into the brain the force, or the imagery, of a particular text. I remember how much I longed, after hearing that sermon, that my life might never be represented by such an image of utter uselessness—the rank, coarse grass upon the thatch, which the mower and the reaper alike despise. A second formative sermon I heard from Dr. Whewell, the great Master of Trinity, when I was an undergraduate at that college. It was on the text, "In quietness and in confidence shall be your strength," and it contained the following words:

**"Consider how great is the weight which these years of your lives have to bear; how much depends upon your forming here a manly and worthy view of the value of your own purity and sobriety of mind; how much to yourselves, how much to your country, how much to your destiny in time and in eternity. Seek to make your weeks roll round like the wheels of a chariot which is to carry you along the road of God's command, which is to bring you continually nearer to the gate of Heaven."**

A third sermon which seized hold of my imagination, and left a real impress on my thoughts, was one delivered in the chapel of Harrow School, when I was a master there, by my friend and colleague, Dr. Westcott, now Bishop of Durham. It was called "Disciplined Life," and was at the time privately

printed by request. The great truth which it taught was that the secret of victory over the world lies in self-surrender. I deeply felt the immediate lesson which it inculcated; but, more than this, the sermon sent me to study with greater diligence the luminous records of Christian biography. It made me fond of that most profitable form of reading, the lives of the saints. The fourth sermon also was privately printed, after its delivery by my dear friend and teacher, Professor F. D. Maurice. It was on the text, "Now the things which are seen are temporal, but the things which are not seen are eternal." I somewhere called it one of the noblest sermons of ancient or modern times. To me, at any rate, it had this unspeakable value, that it revealed to me a great thought by which it is always possible to live. It dissipated from my mind the false and vulgar notion that eternity is in the future. It showed me that the true antithesis to the eternal is, not the present, but the unseen; that the eternal is here and always around us; that it is as the invisible atmosphere which we breathe and whereby we live; and that no metaphor is so false as that which represents time as a river and eternity as the sea into which it flows. It was something, while life was still young, to get firm possession of a thought by which all life may be ennobled and inspired.

If I were to speak of the persons who have influenced me, I should have to make unwarrantable use of the names of many of the living. Marcus Aurelius, at the beginning of his exquisite "Thoughts," draws up a catalogue of those from whom he had gained something, and mentions what he had learnt from each of them. But his record was not meant for any eye, least of all for the eyes of his contemporaries. The particular things which he tells us that he had learnt are, many of them, little things; even so small as that he had been taught by Alexander the Platonist "never to write in a letter that I have no leisure." I do not know that any one has followed the emperor's example, though the things which we have consciously learnt from the example of others would make, I fear, in most cases, a scantier and more trivial catalogue than his. But, if I may not mention the living,

> "*Experiar quid concedatur in illis*
> *Quorum Flaminiâ tegitur cinis, atque Latinâ.*"

A source of happiness in my life has been that I have personally known not a few of the greatest men of this generation. If Pliny thought it worth while to say, "*Virgilium vidi tantum*," I may mention with pride that I have not only seen, but freely conversed with, and in some cases intimately known, such men as Lord Macaulay, Charles Darwin, Thackeray, Carlyle, the late Lord Lytton, Sir Arthur Helps, Archbishop Tait, Archbishop Trench, Dr. Whewell, Bishop Fraser, Bishop Lightfoot, Lord Hatherly, Canon Kingsley, Dr. Edwin Hatch, and many other eminent writers and thinkers who now *abierunt ad plures*. And certainly among those who have happily influenced me in various ways, I may mention five who are now dead, but each of whom I knew for many years. In Dean Wellesley, on the many occasions when I was his guest at Windsor, I saw the beautiful figure of a Christian who was a gentleman of the old school of fine and genial courtesy. In Bishop Cotton, of Calcutta, I knew a man whose whole life was one continuous growth in power and faithfulness. Mr. Matthew Arnold was a friend of many years' standing; and in intercourse with that bright, beautiful nature, so buoyant and so boyish, I saw a constant example not only of

> "The sum of fair six thousand years'
> Traditions of civility,"

but also of the cheery manfulness with which life's trials should be borne. For several years I was thrown into almost daily association with Dean Stanley; and who could resist the charm of that unique personality, with its simplicity and gayety as of "the heart of childhood taken up and matured in the powers of manhood"? Much also I learnt from Mr. Robert Browning, not only as a poet, but as a man. He illustrated the simple dignity of man as man; the way in which high self-respect—the holy reverence of each for his own intrinsic gift of manhood—can raise a man above the reach of hostile influences, and command the homage even of those who sneer. And besides the advantages which I may have derived from the society of such men as these, and of others scarcely less eminent whom I do not name, I was for three years a constant hearer, and for many years a friend, of Professor Frederic Denison Maurice. He was one of the best

men, and one of the greatest, whom I have ever known. His intellectual eminence never betrayed him into the slightest touch of scorn; and though he lived for years amid the roar and bray of religious obloquy, almost utterly neglected and unrewarded by those who dispense the patronage of the English Church, which he had so nobly served, he suffered neither neglect nor depreciation to weaken his high faith in human nature, and was incapable of an uncharitable thought. If ever there was a man who, living in the world, was not of it; if ever there was a man who, in the midst of religious virulence and vulgarity, was sustained by habitual intercourse with all that is high and noble in human thought; it was he. Assailed and calumniated all his life long by

> "Men, the flies of latter spring,
> Who lay their eggs, and sting, and sing,
> And weave their little cells, and die,"

he quietly continued the work which he was appointed to do, and lived too near the Great White Throne to care for the angry buzz of prejudiced ignorance and professional orthodoxy.

In the distant days when I was a boy, books—at any rate among us schoolboys in secluded Mona—were not easily procurable. We possessed but few ourselves, never heard of circulating libraries, and saw only one weekly newspaper, if we saw any at all. Perhaps the modern schoolboy—who reads half a dozen newspapers, who is often familiar to boot with all the sporting papers, and all the "society" papers, and all the literary and religious journals, and who, besides swimming every day in these turbid waters of popular journalism, may surfeit and satiate himself with scraps, and tid-bits, and novels with green and yellow backs, and sensational literature of every possible description—may be inclined to regard us with pity as very benighted beings. I think, on the contrary, that we were distinct gainers by not being buried under mountain loads of nonentity and rubbish. We could get hold of Sir Walter Scott's novels, and Fenimore Cooper's and Captain Marryatt's, and had read them all and discussed their characters among ourselves. We had an excellent anthology of English poetry put into our hands, and in the ordinary course of our work we had to learn a

good deal of it by heart, including such poems as "The Deserted Village," and "The Traveler," and Heber's "Palestine." Nearly all of us had read more or less of the better poems of Byron, Scott, Shelley, Moore, Coleridge, and Wordsworth, for ourselves; and frequently, lying awake in the dormitories after the early hour when we were sent to bed, we discussed and fought over their merits. From early years I have been fond of poetry, and I owe an immense debt to the poets, not only because I have found in them the greatest and best of moral teachers, who revealed to me, or confirmed in me, the purest truths on which it is possible to live, but also because they have illuminated many a dark hour, and have added fresh sunlight to many a bright one, by noble lessons set to natural music in noble words. They have helped me to hang the picture gallery of imagination with lovely and delightful scenes, and to take refuge from any storm which might beat upon me from without, in that flood of unquenchable sunshine which they had kindled for me within. I had in youth a retentive memory. When Lord Tennyson's poems came out, they were to me such a mine of delight and beauty that, though I never sat down to learn one of them by heart, they lingered spontaneously in my mind, and I think that I could have repeated with ease in those days the greater part of the minor poems, and of "In Memoriam" and "The Princess." Not till a later date did I know any more of Browning's poems than is contained in the "Men and Women." How much they taught me, I endeavored to explain in one of the lectures which I delivered in America. I am happy in believing that I was the means of introducing the works of that true poet and thinker to hundreds by whom he had been previously unknown. All who belong to the generation which now looks back on the past years of life, rather than to those which may remain, may find no small reason for gratitude in the fact that their boyhood and youth were nourished by the immortal thoughts which in those days were springing fresh from the minds of Tennyson, and Browning, and Maurice, and Ruskin, and Kingsley, and Newman, and Carlyle.

But I should leave an altogether wrong impression if I should give the idea that my reading was chiefly confined to modern

books. From a child I found it easy to amuse myself, and I never could be unemployed. Reading was a necessity to me, and, like Charles Lamb, I could read all books except chess-boards bound up in two volumes—even "those books which ought to be in every gentleman's library." Books of fiction, as I have said, were scarce among us, so that, when I was unable to get anything else, I turned with no great difficulty to books which I had received as prizes. In this way I had read through, before I was seventeen, such works as Hooker's "Ecclesiastical Polity," Prideaux's "Connection between the Old and New Testaments," Arnold's "History of Rome" and "Roman Commonwealth," the greater part of Southey's and of Aiken's collections of British poets, Coleridge's "Aids to Reflection," and a considerable number of other books which I certainly should not have read if lighter literature had been readily at hand. English books failing, I made shift with any French book which I could get hold of, even such dry nourishment as can be found in Boileau's poems. A book was always to me a book, even if it was not "the precious life blood of a master spirit embalmed for a life beyond life."

Danté was little known to me till I had left college; but Milton, both as a writer and as a man, was a familiar friend and idol from very early days. A little edition of his poems, given me when I was a child, has lain for years upon my study table. It is quite common to hear people confess that they find a difficulty in reading through "Paradise Lost," and there are multitudes who have never read "Paradise Regained." To me, even in school days, they were a delight, and with the former poem I was so familiar that there were few marked passages in any of the twelve books, of which, if a line were quoted, I could not give the remainder from memory. All the minor poems were equally precious to me, except the "Samson Agonistes," of which I did not understand the severe and Greek-like grandeur till later days. When I was a very young man my pupils presented me with Pickering's fine edition of all Milton's works. Till then his prose writings had been but little known to me. No writings are more unequal, but few will deny that they contain some of the grandest and stateliest passages in the

English language. Milton and Coleridge have certainly exercised deeper influence over my life and opinions than any other authors. I received the entire works of Coleridge, both prose and poetry, as a college prize, and became thoroughly familiar with them all. I have no space to mention the permanent lessons of philosophy and theology which I learnt from him, though I have never seen reason to alter the views which he taught me on two subjects of the utmost theological importance—the doctrines of the atonement and the inspiration of the Scriptures. But of Milton's influence over my mind, let me say that, if I were asked to quote the one piece of English prose which has exercised upon me the most permanent influence, I should turn without hesitation to that passage from the "Reason of Church Government" which points to "the inward reverence of a man toward his own person" as one of the chief principles of all godly and virtuous action. It is too long to quote in all its beauty; but this one sentence of it contains the secret of Milton's life, and of every life which has been in the best sense manly:

> **"He that holds himself in reverence and due esteem, both for the dignity of God's image upon him and for the price of his redemption, which he thinks is visibly marked upon his forehead, accounts himself both a fit person to do the noblest and godliest deeds, and much better worth than to deject and defile with such a debasement and pollution as sin is, himself so highly ransomed and ennobled to a new friendship and filial relation with God."**

F. W. Farrar.

## THE STABILITY OF THE FRENCH REPUBLIC.

BETWEEN 1780 and 1890 we have had in France a very respectable number of governments. Not one of them has lasted beyond fifteen or sixteen years, except the third Republic, which but a few days ago entered on its twenty-first year. The Republicans do not hesitate to say that the Republic is now permanently established; and I believe this to be true, first, because the Republic has already lived so long, and, secondly, because neither of the two monarchies by which it is threatened is in a condition to seize the power. Even if one of these should usurp the government, it would not have a fortnight to live.

Let me first say a word about the situation of the Republic with regard to foreign powers. It has been accepted everywhere from the very first day. The Monarchy of July experienced more difficulty in obtaining recognition. Like Louis XIV., who preferred an atheist to a Jansenist, the absolute monarchs have accepted a republic with better grace than they did a constitutional king. No menace has ever come, except from Germany. That country recognized us because it had a treaty with us; but, as it saw with what rapidity we were rebuilding our strength, it repented, and pondered how it might find a pretext to break the peace and to fall upon us while we were still in a state of formation. There were two parties at the German Emperor's court. His minister wanted to make a Poland of us, and by a decisive blow to get rid of "the hereditary enemy." The old Emperor, having brought his house and country to the highest pinnacle of power and splendor, wished to run no further risks. He clearly saw that France was not ready to conquer, but that it was ready to resist. Europe, which regretted that it had permitted the colossal aggrandizement of the Empire, manifested everywhere a disposition not to complete its own defeat by allowing us to be crushed. Thus the Republic spent its first years in a precarious state and in the midst of perpetual fears.

During this time, however, it was strengthening itself in every way. It was repairing old fortresses, erecting new ones, establishing strategical routes wherever they were necessary, filling its warehouses and arsenals, and improving the *personnel* and discipline of the army. At present the triple alliance constitutes an enormous force, with which no isolated state, were it the first military power in the world, could cope. But the triple alliance would very quickly be divided if war should break out. Italy and Austria have great difficulty in maintaining harmony with each other. The governments wish it. The peoples do not; they are separated by the hatred of centuries. Germany inspires fear in its allies. They wonder whether, in case they should gain victory in company with it, they would not the very next day be found among the conquered.

But what makes our position secure is the well-known resolution and the palpable interest of Russia. It would be with us at the first signal of war. This situation explains the permanence of peace for so many years, and allows us to predict its duration. Every year some *casus belli* is on the point of arising—in the Balkans, in Asia, on our frontiers, or in the new colonies. Immediately all diplomacy is on foot to make it disappear. The fact is that peace is held dear in Berlin, as well as in Paris. The Emperor of Germany said to me, in person: "In my position, it is better to do good to men than to inspire them with fear." The policy of France since 1871 has been constantly prudent, conciliatory, and skillful. Mr. Gladstone bore public testimony to this at the banquet given him in Paris two years ago. The task has been difficult, for it has been necessary to avoid quarrels without wounding the national pride; but we have succeeded in it.

Let us now glance at the internal affairs of the Republic, and first at its Constitution. The government is vested in a Chamber of Representatives, elected for four years by popular universal suffrage; in a Senate, elected for nine years by representative universal suffrage and renewed one third every three years; and in a president, elected for seven years by the two chambers in congress assembled. The Constitution is not immutable. It can be modified without creating any agitation in the country. It

has been so modified several times. For example, one fourth of the Senate was formerly composed of members nominated for life by the Senate itself. This feature has been suppressed; at present all senators are elected, and hold office for nine years. The choice of a new president, which the adversaries of the Republican *régime* are in the habit of representing as a cause of trouble, and even as a periodical revolution, is effected as easily as the replacing of one ministry by another. I am far from pretending that the Constitution is perfect; I think it can be improved; but I am of the opinion that its amendment should never be attempted except after long and mature deliberation. I assert that, as it is, the Constitution suffices perfectly for the government of a great people. I am, in general, more concerned about the manner in which a law is applied than about the law itself. Habits, traditions, and beliefs grow up, and they become, as it were, the particular temperament of a government and of a people. This process requires time.

The government acts through the civil service. It requires also departments of public strength and justice. Finally, the whole edifice rests on the integrity of the elections, and all its branches are sustained by the budget. I shall say a word on these various points.

The form of the civil service is the same in the Republic that it was in the Empire. Nothing has been altered in its organization; very little change has been made in its *personnel*. Some ministers have thought it incumbent upon them to get rid of functionaries who had made themselves conspicuous for their zeal in the service of the old government, and to replace them with stalwart Republicans. These changes have discouraged the old employees and have introduced disorder into the service. The disorganization, however, is less general than is believed. Our functionaries are too numerous, they are too poorly paid, they are inclined to routine, and they do not always show the public that kindness and politeness which they should look upon as a duty; but their system is strongly established, their powers and duties are clearly defined, their aptitude is remarkable, and their probity is beyond all praise. They possess in the highest degree the feeling of professional honor.

In several branches of the service we have practically the old administration of Colbert, improved rather than replaced by the Revolution. This country, whose fault is a wish always to innovate, lacks traditions in government, but has excellent ones in its civil service. The latter correct the former. This strong organization of the public service enables it to go without great damage through the greatest crises. This may have been observed at periods of revolution. At such times, when everything is in commotion, the course of public business does not suffer even a momentary interruption. The administration moves on in the most perilous crisis. When a new government is in power, it is ready to obey that as it had obeyed the fallen one.

The Republic is therefore very well served by its civil officers, as the Empire was before it. It can depend also upon the loyalty of the army. It is sometimes said among us that the army has no opinion. This is untrue; how could it be ignorant of the questions that divide us, and how could it do otherwise than take sides? But it knows that all manifestation of its opinions is forbidden. The law even refuses it the right to vote. It never discusses the orders it receives, and it never hesitates to obey them. In order to know what it has to do in all circumstances, it is sufficient that it should clearly know who has the right to command it. Between two chiefs who should give contradictory orders, it would disobey the one who held the lower rank. This question is of the most delicate nature. I do not discuss it here as a theorist; I assert, as a fact, what I believe to be the disposition of our army. Among its chiefs, some are popular and others are not; but if the most popular chief should turn against legitimate authority, it would not follow him.

Napoleon I., on his return from Elba, was the first to shake this traditional fidelity to the *de facto* government. A similar attempt, made at Strasburg by his nephew, miserably failed, because the soldiers saw more clearly where their duty lay. In 1830 and in 1848, probably a great portion of the army was at heart on the side of the insurrection, yet at the word of command every one obeyed. We had, in 1871, days of cruel anxiety. There was doubt in Versailles, even in inner government circles, as to whether the troops would obey the command to fire upon

the insurgents of the Commune. What were these troops? They were composed, for the greater part, of young men enlisted only a few weeks before, brought together at hap-hazard under officers whom they did not know, demoralized by defeat, and persuaded that the government was secretly working for the re-establishment of the Monarchy. And yet this army, scarce worthy of the name at the beginning of the struggle, shouldered its guns at the word of command. One hour had not elapsed after the opening of hostilities before it was under the control of its chiefs and ready to follow them everywhere. We have much more reason for trusting the soldiers to-day. I therefore very decidedly think that the government has the army at its disposition, and that in Paris we have to fear neither riot nor defection.

At a period when the government was leaning toward excessive radicalism, great changes were made in the magistracy. These could be effected only by a new law, because, with us, judges are irremovable; so an act was passed giving to the Minister of Justice power to remove magistrates suspected of favoring the Empire or the Monarchy. This was a mistake. It dealt the principle of irremovability an irreparable blow, and replaced judges educated for the magistracy, nourished in its traditions, and regarded with universal esteem, by men who were recommended by their opinions rather than by their characters. The tribunals were thenceforth considered no longer as impartial interpreters of the law, but as auxiliaries of the government, whose duty was to render service instead of judgment. The effect was very bad. It has become less so with time, because the new magistrates have become impregnated with the spirit of their colleagues; but none the less was it a blow dealt to the Republic by Republicans. One of the most necessary and august functions of a government is to administer justice, and it is impossible to diminish the authority of justice without taking away from the government a portion of its strength.

The election of deputies is by popular universal suffrage. Every citizen twenty-one years of age who has not been deprived of his civil rights deposits his vote in the ballot box. This is simple justice. The deputy who is commissioned to vote a tax should be chosen by all the taxable; the maker of the law should

be elected by all who come under its jurisdiction. This system, besides, is equalizing and democratic. The property-test *régime* which it has succeeded made political rights depend on wealth; it was therefore contrary at once to the principle of equality and to the dogma of the sovereignty of the people.

Universal suffrage may be vitiated in two ways—through the money of candidates or by the influence of the government. Individuals are mentioned who have spent as much as 200,000 francs for a seat in the Chamber of Deputies. Half a million francs came out of the coffers of Boulangism for three elections only. One cannot see, among such conditions, what becomes of equality. If we have begun to buy votes, it is time to exclaim with La Mennais, "Silence, ye poor!" The Boulangists, in order to explain the size of their expenditures, pretended that the Minister of the Interior had disposed of eight millions in his own interest. But, apart from the enormous disproportion between the figures, evidently a minister can neither buy votes nor give money to buy them. Even if this were possible, I am convinced that the present minister would not do it.

The danger is none the less real. Ministers of all sorts may come to us, and I do not know why the revolving wheel of fortune should not bring us an unscrupulous one. To pay for votes would be, on the part of a minister, more than corruption, it would be foolishness; but he can deceive the electors about the candidates, lavish upon well-disposed communes the marks of his favor, and make the others feel the weight of his wrath. We have seen all this under the Empire. Popular universal suffrage, therefore, does not, as is pretended, express the will of the people; it is at the mercy of a minister who may not be wholly scrupulous, or of a coalition of the wealthy. It would perhaps be wiser to have recourse to representative suffrage, and to name electors who should choose the deputies. Certainly, with the present system no one can answer in advance for the result of elections. It is a real danger to the Republic. But this peril is not peculiar to our government. No government, not even a reactionary one, would dare to re-establish the property test. Besides, the present moment, when capital is attacked from every side, would be a bad one for conferring upon it the monopoly of poli-

tical power. Several years ago, the Count of Paris, in a manifesto, declared himself reconciled to universal suffrage. This adhesion, and that of the Empire, which perverted but accepted it, made it final. We may find inconvenient features in it and look for palliatives, but we cannot relinquish it.

This rapid review is sufficient to show that the Republic has all the organs needed by a government in order to live and to last. The difficulties which universal suffrage may create for it are not due to the nature of the Republic, and would make themselves felt with as much force in a monarchy. I say as much about the budget. The Republic has nothing to do with the difficulty experienced every year in adjusting it. A monarchy would suppress none of our expenses; it would only create new ones. Every year, on the appearance of the budget, the enemies of the Republic strive to pick a quarrel with it. Where is the time when the budget did not reach a billion francs? It reaches three billions now; but whose fault is it? Not that of the Republic, which has only liquidated the debts of the Empire. The Republic did not force us to pay a ransom of five billions, and to spend five billions more in repairing our ruins.

True, within the last twenty years useless expenses have been incurred, and money has not always been wisely used. Our ministers of finance during that period have been men of talent, but not men of genius, with perhaps the exception of M. Thiers. And yet our budget, embarrassed as it is, does not make me blush for the Republic. I think that its critics do not give it due credit either for the burden thrown upon its shoulders by the Empire, or for the immense work of reconstruction it has accomplished. The preceding *régimes* did not have to fund and liquidate a debt of ten billions; they did not have to maintain our arsenals on a war footing in time of peace; they did not have to remodel our military system from top to bottom; the struggle against rival industries did not oblige them to open so many canals, to build so many railways, to construct so many docks and warehouses. France, without doubt, is involved in debt; but she lacks nothing now, either for the defense of her territory or for the development of her industries. I even go so far as to approve what has been too emphatically called the

creation of our colonial empire, though possibly we proceeded somewhat at hap-hazard in the conquest of Tonquin. Were I to enter into criticism of the details, I should have a great deal to say. I am none the less persuaded that, in order to build up anew our navy and our foreign trade, we needed the establishments we have formed in Tonquin, Madagascar, and Tunis.

For the payment of these expenses, the government oscillates perpetually from loans to taxes, and from taxes to economies. A loan is but a postponement. The taxes are already oppressive, and whenever some measure of retrenchment is proposed, it is discovered on examination to be iniquitous or impossible. Many thoughtful men are of the opinion that an important resource would be found in the increase of the tax on spirituous liquors. This is my own view. This tax is one of the least objectionable, because it does not fall on an article of prime necessity. It could be easily collected and would yield great returns.

A saving, which would cost the radicals dear, would result from the suppression of the budget of public worship. It is not necessary to make an hypothesis here, for we know exactly what we pay to the authorized churches. Here is an annual saving of fifty-two millions which the deputies can effect by the mere raising of a finger. Its necessary consequence would be absolute liberty of worship. Principles only being considered, this double reform seems to me to be justified. But politics are not conducted solely on principles; facts also must be reckoned with. Now the facts are these: There are fifty millions of Catholics in France, and it would be impolitic either to dissatisfy them or to emancipate their clergy. The peculiar organization of the Catholic Church gives to its clergy a power possessed in the same degree by no other body. For centuries every government has understood that it must be treated with on a footing of equality, and for this concordats have been made —compromises which cost the state dear, and which take away from the Church, even in spiritual matters, its own free direction.

Until now, the Republic has refused the suppression of this budget, which is being demanded of her with increasing force. Those who ask it feel really no concern about the rights of con-

science. They do not want to allow the clergy any of the advantages stipulated for it in the concordat, but at the same time they want to preserve those which the concordat grants to the state; for instance, the power of nominating the bishops—a singular way of understanding a bipartite contract. In the mean time, while waiting to realize their plans fully, they have wrested from the weakness of the more moderate Republicans a group of vexatious and irritating measures which nothing justifies, and which have made dangerous enemies for the Republic. The congregations have been dissolved; the hospitals and schools have been secularized; the exterior signs of religion—the "calvaries" on public squares, the crucifix in schools, in hospitals, and in justice courts—have been suppressed; the priests have been excluded from all connection with the distribution of charities and with public instruction. These measures have irritated the militant Catholics, and have brought back to their ranks a number of lukewarm churchmen. The application to the clergy of the military law will still more exasperate this hostility; but as the law is being applied for the first time at this very moment, it is not possible to foresee the consequences.

These quarrels, wantonly stirred up and profoundly to be regretted, are not irremediable. The policy of the Catholic Church is not one of rancor; it adapts itself to accomplished facts and makes the greatest possible use of them in its own interest. It is inflexible only with regard to dogma. The Church, irritated and threatened, does to the state to-day all the harm it can; reassured and treated with steady kindness, it will quickly become neutral. Danger exists in this respect only through the fault of those who govern us.

To sum up, the Republican establishment seems solidly constituted. It has all the organs of life and duration. It can be improved without being subjected to serious crises. Far from being worn out, it is stronger to-day than at its beginning. But its principal strength springs from the increasing weakness of its enemies. It may have been thought for a considerable time that the Boulangist conspiracy proved, through its mere existence, the weakness of the Republican government. It is a trite remark to say that General Boulanger is of the ordinary

material of which all our generals are made, neither superior nor inferior to his colleagues; and that there is nothing peculiar in him, barring a certain impatience with discipline—a very grave defect for a soldier, and one almost without example in the high *personnel* of the army. As a general, he proved himself a bungler in Paris. As a minister, he sought popularity with the army by some imprudent measures, and with the public by somewhat dangerous and rather ridiculous rodomontades. As a politician, he affiliated with the radicals, which is no sign of a very sagacious mind. This was General Boulanger as he was known before the revelations of M. Mermeix. His party had a staff not very reassuring from an intellectual point of view and very disquieting from a moral point of view. As for his opinions, no one knew them, and, to say the truth, one scarcely knew the opinions of the party. It defined them badly and changed them from time to time. That a party so constituted could in a short time acquire popularity, seemed a demonstration of the weakness of the Republic. The Boulangists committed no open infraction of the law, if we except two or three cases which may have been fortuitous. Their success was humiliating and alarming, but it was not illegal. The fact that it was not illegal made it so much the more alarming.

At the time of Boulanger's trial, it was believed that he could have secured an acquittal had he not allowed a condemnation by default. We know now that we knew nothing, or almost nothing, at that time. The general, in active service, had gone, under a borrowed name, to offer his co-operation, for a money consideration, to a pretender to the imperial throne. Politely shown to the door, or something near it, he began an intrigue with the Royalists. In Switzerland he was ready to make an emperor; in London he promised to make a king; among his intimate friends he swore he would maintain the Republic. This constituted two crimes, and even three; for he lied to the Republicans as to the two pretenders, and, as he had no other aim than to rise as high as possible, he did not himself know along which of the three open avenues he would proceed. Meanwhile, as he needed money, he took that which was offered him. His poor dupes sent him their savings. The Duchess d'Uzès

gave him three millions for the making of a king; he took the money, and yet he declares to-day that he had the firm intention of remaining a Republican. Under these conditions, one wonders how to designate the acceptance of these three millions, accompanied probably by other millions from that same part of the political horizon. But let us leave that aside. The least important thing in the Boulangist adventure is Boulanger.

The Bonapartist party has greatly declined of late. It has Sedan against it; apparently it ought to be dead. It is divided against itself. It is trying to make something of an insignificant man, of whom his partisans can name neither a quality nor an act, and who is known to the world solely through the circumstance that he is the rival and declared enemy of his father. The father has against him the great mass of the party. The two political staffs, that of the father and that of the son, are composed mostly of forgotten or unknown men. The mass of the rank and file trooped after Boulanger. It is purely the cocked-hat-and-feather party. Universal suffrage turns its back upon it; public opinion disdains or despises it. Neither Jerome nor Victor is to be feared by the Republic.

It was otherwise with the monarchical party. It was neither very noisy nor very numerous; but it had in its favor the high honor of a family in which character and talents abound, and it was supported by the aristocracy and the princes of finance. The foolish persecutions of religion had brought the clergy back to it. This party was not ready, but it was strong. It did not do battle, but it remained and lasted; and to last without committing mistakes is a great deal, for one profits by the mistakes of the enemy. The most clear-sighted minds thought that the Republic might lean toward that side some day.

There were, until the death of the Count of Chambord, two monarchies—the inflexible monarchy and the accommodating monarchy; the king by right and the king of affairs; the master and the steward. Chambord was the past; he was a legend; he was a religion. The Count of Paris was chiefly a resource. The two branches of the house of Bourbon seemed irreconcilable. Chambord was honored, even in the eyes of the Republicans, by the inflexibility of his doctrine and of his con-

duct. He was a spectacle. He represented, among us men of the nineteenth century, I will not say the past, but the ideal of the past. There are still a few kings in Europe, although in America there are no more; but all the reigning kings, with the exception of the Czar, are only constitutional kings, half-kings, crowned presidents of republics. Chambord alone was a real king. He lived in exile; but he was a king, he was royalty. Once he was asked to take the crown. It would have been very unsteady on his head. I know not whether it would have stayed there a fortnight. As for him, he had the illusions of his trade, and believed in the duration of his reign. But in order to reign, it was necessary to lower his head. He neither could nor would do it. He remained immovably attached to his principle, and his principle died with him. Like those ancient barons who left no heirs after them and were buried with their swords, he might have been interred with his crown.

Only the king of the younger branch remains to the monarchy now. The Count of Paris is a very intelligent man; he is very learned; he is brave; he is patriotic; he is, in his private life, a man of irreproachable honor. His first political act was his visit to Frohsdorf to recall to the king that he was the heir to the royal rights. But this very step only proved the impossibility of resuscitating the Count of Chambord. I do not accuse the Count of Paris, as is too lightly done, of having bought his royal claims of M. Boulanger. He is too much a Frenchman to take part in a *coup d'état*, too honorable to put up with such an ally, and too shrewd to have believed that M. Boulanger had a crown to sell. He simply put money in a "deal" for votes directed by the agency of Boulanger. He furnished the millions and Boulanger the popularity. He had stipulated that he would be given for his money the greater part in the products, that is to say, a conservative majority. The failure diminished his chances so much that the Republic has now no longer any enemies before it; or, if it has any, they are Republican enemies.

JULES SIMON.

# FAMILY STOCKS IN A DEMOCRACY.

In an address before the Phi Beta Kappa Society of Harvard University two years ago, I endeavored to show, among other things, that democratic government, as distinguished from aristocratic or autocratic government, has no quarrel, as has been alleged, with the biological law of hereditary transmission; that families can be made just as enduring in a democratic as in an oligarchic state; and that the highest types of manners in men and women are produced abundantly on democratic soil. I maintained that the social mobility of a democracy, which permits the excellent and well-endowed of either sex to rise unimpeded from lower to higher levels and to seek each other out, and which gives every advantageous variation in a family stock free opportunity to develop, is immeasurably more beneficial to a nation than any selective in-breeding, founded on class distinctions, that has ever been devised. I pointed out that democracy promotes the transmission and development of inheritable virtues and powers, although it does not add to the natural sanctions of the law of heredity an unnecessary bounty of privileges conferred by law, and, indeed, abolishes the legal transmission of artificial privileges. On that occasion I had no time to do more than to mention some of the means of perpetuating good family stocks in a democracy. It seems to me, however, that the principal means of preserving useful families in democratic society ought to be fully discussed; because the family, rather than the individual, is the important social unit; because the perpetuation of sound families is of the highest social interest; and because the democratic form of government is that form which in a few years, or a few generations, will prevail all over the civilized world. To that discussion I venture to contribute the following considerations.

It must be observed, in the first place, that the social freedom and mobility which permit every superior person to rise to his appropriate level in democratic society, would be doubtful

advantages, if for every person or family which should rise another should sink. If society as a whole is to gain by mobility and openness of structure, those who rise must stay up in successive generations, that the higher levels of society may be constantly enlarged, and that the proportion of pure, gentle, magnanimous, and refined persons may be steadily increased. New-risen talent should reinforce the upper ranks. New families rising to eminent station should be additions to those which already hold high place in the regard of their neighbors, and should not be merely substitutes for decaying families. In feudal society, when a man had once risen to high rank, there were systematic arrangements, like primogeniture and entailed estates, for keeping his posterity in the same social order. A democratic society sanctions no such arrangements, and does not need them; yet for the interests of the state, the assured permanence of superior families is quite as important as the free starting of such families.

Before going further, I ought to explain what I mean by good, or superior, family stocks. I certainly do not mean merely rich families. Some rich families are physically and morally superior; others are not. Obviously, in our country sudden and inordinate wealth makes it not easier, but harder, to bring up a family well. Neither do I have sole reference to professional or other soft-handed people who live in cities. On the contrary, such persons often lack the physical vigor which is essential to a good family stock. I have in mind sturdy, hard-working, capable, and trustworthy people, who are generally in comfortable circumstances simply because their qualities are those which command reasonable material, as well as moral, success. I have in mind, for instance, a family whose members have multiplied and thriven in one New England village for 130 years, always industrious, well-to-do, and respected, but never rich or highly educated, working with their hands, holding town and county offices, leading in village enterprises, independent, upright, and robust. I have in mind the thousand family stocks which are represented by graduates, at intervals, for one hundred years or more, on the catalogues of Harvard and Yale colleges—families in which comfort, education, and good character have been transmitted, if riches or high place have not. The men of a good family stock may be

farmers, mechanics, professional men, merchants, or that sort of men of leisure who work hard for the public. But while I give this broad meaning to the term "good family stocks," I consider that one kind of family ought especially to be multiplied and perpetuated, namely, the family in which gentle manners, cultivated tastes, and honorable sentiments are hereditary. Democracy must show that it can not only ameliorate the average lot, but also produce, as the generations pass, a larger proportion of highly-cultivated people than any other form of government.

What, then, are the means of perpetuating good family stocks in a democracy? The first is country life. In this regard, democracies have much to learn from those European aristocracies which have proved to be durable. All the vigorous aristocracies of past centuries lived in the country a large part of the year. The men were soldiers and sportsmen for the most part, and lived on detached estates sparsely peopled by an agricultural and martial tenantry. They were oftener in camp than in the town or city. Their women lived in castles, halls, or chateaux in the open country almost the whole year, and their children were born and brought up there. The aristocratic and noble families of modern Europe still have their principal seats in the country, and go to town only for a few months of the year. These customs maintain vigor of body and equability of mind. It is not necessary, however, to go to Europe to find illustrations of modes of life favorable to the healthy development and preservation of superior families. In the last century, and in the early part of this century, the country minister and the country lawyer in New England were often founders, or members by descent, of large and vigorous family stocks, in which well-being and well-doing were securely transmitted. Their lives were tranquil, simple, not too laborious, and sufficiently intellectual; and their occupations took them much out of doors. They had a recognized leadership in the village communities where they made their homes, and also in the commonwealth at large. They took thought for education in general, and for the recruiting of their own professions; and they had a steadying and uplifting sense of responsibility for social order and progress, and for state righteousness. In many cases they transmitted their professions in

their own families. So excellent were these combined conditions for bringing up robust and capable families, that to-day a large proportion of New England families of conspicuous merit are descended on one side or the other from a minister or a lawyer.

In American society of to-day the conditions of professional and business life are ordinarily unfavorable to the establishment of families in the country. The great industries are carried on at centers of dense population; trade is concentrated in large towns and cities; lawyers, journalists, and artists of every degree, medical specialists, architects, and consulting engineers, must all spend their days in cities. The well-educated country minister and country lawyer have almost disappeared. Population tends more and more to concentrate in dense masses. In a few of our older States, from 50 to 75 per cent. of the whole population live in groups or assemblages numbering 8,000 persons or more. City life is changeful, noisy, exciting, and hurrying; country life is monotonous, leisurely, and calm. For young children particularly, the necessary conditions of dense populations are unfavorable. How great the difference is between an urban and a rural population, in the average age of all who die, may be conveniently illustrated from the registration reports of Massachusetts, which have now been published for 47 years and are believed to be reasonably accurate. In the thirty years from 1850 to 1880, the average age of all the persons who died in Suffolk County, an urban county on the seaboard, was 23½ years; the corresponding age in Barnstable, a rural county on the same seaboard, was 37; in Franklin, an inland rural county, it was 38½; while in the island county of Nantucket it was very nearly double the average age at death in Suffolk, namely, 46.15. The same reports show that the annual death rate is uniformly higher in the densely-populated counties than in the sparsely-populated ones. Other causes beside density of population contribute to produce these striking results; but the main fact remains that a family which lives in the country has a better chance of continuance than one which lives in the city. Moreover, if we study the family history of the actual leaders, for the time being, in business and the professions in any American city, we shall usually find that a very large proportion of them were

country-bred. The country breeding gives a vigor and an endurance which in the long run outweigh all city advantages, and enable the well-endowed country boys to outstrip their city-bred competitors.

A very practical question, then, is how to resist, in the interest of the family, the tendency to live in cities and in large towns. For families in easy circumstances there is no better way than that which European experience has proved to be good, namely, the possession of two houses, one in the country and the other in the city, the first to be occupied for the larger part of the year; but this method is costly and involves a good many things not noticed at first sight. Thus, for example, it involves the employment of governesses and tutors for children under fifteen years of age, and the use of country boarding schools to some extent for older children. It involves, also, the exercise of hospitality on a large scale, in order to secure social variety in the country house. It needs, too, good postal facilities, circulating libraries, fair roads, and some smooth, sheltered footpaths. During the past thirty years there has been in the eastern States a great increase in the number of families using two houses, and the tendency in such families has been to spend a longer and longer time in the country or by the seaside. Colleges, academies, and private schools have arranged their terms and vacations to meet this growing practice; that is, they have a Summer vacation of from three to four months. Teachers of music and of the fine arts in the cities have no lessons to give from the first of June to the first of October. A large number of students in Harvard College get engagements to teach for the Summer in families, or groups of families, which are living in the mountains, in the open country, or by the sea. College undergraduates used to teach country district schools for twelve weeks in the Winter; they now teach in families, or at Summer resorts, for twelve weeks in the Summer. These facts, and many others which might be cited, indicate a wholesome change in the habits of well-to-do families, in favor of country life.

The next change for the better to be noticed is the adoption of suburban life by great numbers of families, both poor and well-to-do, the heads of which must do their daily work in cities.

Recent improvements in steam railway transportation make it easy for a family man, whose work is in the city from eight or nine o'clock till five or six o'clock, to live fifteen or even twenty miles from his office or shop. The chances are strong that the death rate in an open-built suburb, provided with good water and good sewers, will be decidedly lower than in the city; indeed, that it will not be more than from one half to three quarters of the city death rate. In the suburb are better air, more sun, and a more tranquil life. This method obtains more and more in the Atlantic States north of the Potomac, in England, and in Australia. The advantages of suburban residence may, however, be almost neutralized for the men, if the daily travel to and fro is made wearisome, annoying, or unwholesome. It is always to be wished that the ride home from shop or office should be a refreshment instead of an added labor. In many American cities the means of communication between the business quarters and the suburban residence quarters are so thoroughly bad that for the men it is a positive hardship to live in the suburbs. It is said that in some of the new cities of Australia, parks have been laid out between the business and the residence quarters, so that the daily rides between the two districts may always be agreeable.

A third mode of combating the ill effects of density of population, and of giving city families some of the advantages of country life, is by increasing in cities the provision of public squares, gardens, boulevards, and public parks. The city open square or garden is one thing, and the city park quite another; the former being properly only an open-air sitting room or nursery for the neighboring people, the second being a large piece of open country brought into the city. Both are needful in much larger number and area than has been the custom to provide in American cities. It is important also to cultivate among our people the habit of using all the squares and parks they have, for Americans are very far behind Europeans in the intelligent use of such reservations. To this end the foreign custom of half-holidays in the various trades is an excellent one, particularly if the half-holidays are taken on Wednesdays or Saturdays, when there are half-holidays in the public

schools. To promote healthy family enjoyments among laboring people, ten hours' labor a day, with a half-holiday once a week, is a much better industrial arrangement than nine hours' labor every day in the week.

An important advantage which country life has over city life is that it requires, permits, or encourages out-of-door occupations for men, women, and children. The farmer and his boys habitually work in the open air; the mill hand, clerk, machinist, teacher, lawyer, and minister work in-doors, often in positively bad air. To offset the evil effects of in-door occupations, every city family which aspires to vigor and permanence should assiduously seek fresh air and out-of-door pleasures or occupations. All children in well-to-do families should be taught to walk long distances, to swim and to row, and to ride on horseback. Girls need these accomplishments as much as boys. In this matter, also, democratic society must learn from aristocratic. Rich people used always to be great landowners; now, unfortunately, people may be rich and yet own nothing but stocks and bonds, not even one house. European nobilities were always an agricultural class, loving good land and good crops, rejoicing in horses, dogs, and cattle, and delighting in hunting, fishing, shooting, racing, and all other forms of open-air sport. Men, women, and children rode on horseback habitually, and took long journeys in that wholesome way. Their castles and halls were so open to the air and so little warmed, that even their in-door life was not so enervating as ours. If modern democratic families are to be perpetuated like ancient aristocratic families, they must live as robust and healthy lives. If the family occupations are not manual, the boys should learn to use some tools—the gardener's, carpenter's, turner's, blacksmith's, machinist's, founder's, or plumber's—and the girls should learn to cut out, sew, knit, and cook; and whether the family occupations are manual or not, out-of-door life should be cultivated to the utmost. Americans have not the skill of Europeans in availing themselves of every chance to eat or work in the open air, under the shelter of a tree or of a vine-clad arbor. Neither the poorer sort nor the richer possesses this skill, or feels an irrepressible desire for such opportunities. One often sees, in the suburbs of our cities,

large and costly houses placed in lots so small that the owners and their families have hardly more room for out-of-door pleasures than they would have in a city block. Many a rich American, who occupies without any scruple a house worth $100,000, will hesitate to keep open for the use of his family, and for the indirect advantage of his neighbors, an acre of suburban land worth only $50,000. The Germans, in their native country, excel in the out-of-door habit. Every restaurant and beer garden must have some space out of doors, however small, for the use of its patrons in the warmer half of the year. Every school takes care of the natural-history rambles of its pupils. In the long vacation, walking journeys for the boys are arranged and conducted by the teachers. Families devote a part of every Sunday in good weather to some open-air excursion. In some of the smaller manufacturing towns of Germany, on a pleasant half-holiday, it seems as if the whole population had deserted the houses, and had taken to the open air in the streets, squares, and gardens. It is extraordinary how little provision has been made in most American towns and cities for the out-of-door enjoyments of the population. Even when public squares and gardens have been reserved or purchased, they are often left in an unkempt condition and without proper police protection, and are not provided with seats, shelters from sun and wind, sand-heaps for little children, gymnastic apparatus for older boys and girls, and open-air restaurants at which simple refreshments may be obtained. As compared with European governments, American democratic government seems to take no thought whatever for the healthful enjoyments of an urban population.

I venture to state next the proposition, that a permanent family should have a permanent dwelling-place, domicile, or home town. In older societies this has always been the case. Indeed, a place often lent its name to a family. In American society the identification of a family with a place is comparatively rare. In American cities and large towns there are as yet no such things as permanent family houses. Even in the oldest cities of the East, hardly any family lives in a single house through the whole of one generation, and two successive generations are rarely born in the same house. Rapid changes of residence are

the rule for almost everybody, so that a city directory which is more than one year old is untrustworthy for home addresses. The quick growth of the chief American cities, and the conversion of residence quarters into business quarters, partly account for the nomadic habits of their inhabitants; but the inevitable loss of social dignity and repose, and the diminution of local pride and public spirit, are just as grievous as if there were no such physical causes for the restlessness of the population. The human mind can scarcely attribute dignity and social consideration to a family which lives in a hotel, or which moves into a new flat every first of May.

In the country, however, things are much better. In the older States there are many families which have inhabited the same town for several generations, a few which have inhabited the same house for three generations, and many farms that have been in the same family for several generations; and in more and more cases prosperous men, who have made money in business or by their professions, return to the places where their ancestors lived, and repossess themselves of ancestral farms which had passed into other hands. In the country it is quite possible, under a democratic form of government, that a permanent family should have a permanent dwelling; and in any village or rural town such a family dwelling is always an object of interest and satisfaction. To procure, keep, and transmit such a homestead is a laudable family ambition. It can be accomplished wherever testamentary dispositions are free, and the object in view is considered a reasonable and desirable one. It must be confessed, however, that very few country houses in the United States have thus far been built to last. We build cheap, fragile, and combustible dwellings, which, as a rule, are hardly more durable than the paper houses of the Japanese. Nevertheless, our families might at least do as well as the Japanese families, which are said to live a thousand or fifteen hundred years on the same spot, although in a series of slight houses.

The next means of promoting family permanence is the transmission of a family business or occupation from father to sons. In all old countries this inheritance of a trade, shop, or profession is a matter of course; but in our new society, planted on a fresh

continent, it has not been necessary thus far for every family to avail itself, in the struggle for a good living, of the advantage which inherited aptitude gives. But as population grows denser and competition for advantageous occupations grows more strenuous, and as industries become more refined and more subdivided, the same forces which have produced the transmission of occupations in families in Europe and Asia will produce it here. The children of the ribbon-weaver can learn to weave ribbons quicker and better than any other children; the son of a physician has a better chance than the son of a tanner to learn the art of medicine, and besides, he may possess an inherited faculty for medical observation; the son of a lawyer can be quietly inducted into his father's business with great advantage to both father and son. In all such cases, success depends on the hearty co-operation of the children, who may be impelled to work either by ambition and by an inherited disposition, or by the healthy stimulus of impending want. Under right conditions, a transmitted business tends to make a sound family more secure and permanent, and a permanent family tends to hold and perfect a valuable business. This principle, which is securely founded on biological law, applies best in the trades and professions, in ordinary commerce, and in the industries which do not require immense capitals; but in Europe many vast industries and many great financial and mercantile concerns are family properties, and there is in our own country already a distinct tendency to this family management of large businesses, as being more economical and vigilant than corporate management, and more discerning and prompt in selecting and advancing capable men of all grades. The principle seems frequently to fail in this country in regard to the sons of uneducated men who have become very rich through some peculiar skill or capacity of their own which is not transmissible, or at least is not transmitted. The difficulty seems to be that the sons feel no sense of responsibility for their privileges and no inducement to work. Brought up to do nothing, they sink into the life of mere idlers, and are dispossessed by hard-working and ambitious men of the very business which the fathers created, and which they would gladly have had their sons inherit.

The most important of all aids in perpetuating sound family stocks is education. Whatever level of education a family has reached in one generation, that level at least should be attained by the succeeding generation. It is a bad sign of family continuance if a farmer, who was himself sent away from home to a country academy for two or three terms, does not give his son the same or the corresponding opportunity. It is a bad sign if a clerk in the city, who himself went through the high school, is content that his son should stop at the grammar school. It is a bad sign if a professional man, whose father sent him to college, cannot do as much for his son. Diminution of educational privileges in a family generally means either decline in material prosperity or loss of perception of mental and spiritual values. The latter loss is a deal worse than loss of property in its effect on family permanence; for low intellectual and moral standards are fatal to family worth, whereas countless excellent families meet with reverses in business, suffer losses by flood or fire, or confide in untrustworthy persons, and yet survive with all their inherent mental and spiritual excellences. In a righteous democracy the qualities which make a family permanent are purity, integrity, common sense, and well-directed ambition. Neither plain living nor rich living is essential, but high thinking is. Now, the ultimate object of education, whether elementary, secondary, or higher, is to develop high thinking. What, for example, is the prime object of teaching a child to read? Is it that he may be able to read a way bill, a promissory note, or an invoice? Is it that he may be better able to earn his living? No! These are merely incidental and comparatively insignificant advantages. The prime object is to expand his intelligence, to enrich his imagination, to introduce him to all the best human types both of the past and of the present, to give him the key to all knowledge, to fill him with wonder and awe, and to inspire him with hope and love. Nothing less than this is the object of learning to read; nothing better or more vital than this is the object of the most prolonged and elaborate education. The improvement of the human being in all his higher attributes and powers is the true end; other advantages are reaped on the way, but the essential gain is a purified, elevated, and expanded mind. We

often hear it said that high-school graduates have learned too much, or have been trained out of their sphere—whatever that may mean—and that colleges do not produce the captains of industry. Such criticisms fly very wide of their mark. They do not conform to the facts, and they betray in those who make them a fundamental misconception of the ultimate object of all education. The object of education and of family life is not to promote industry and trade; rather the supreme object of all industry and trade is to promote education and the normal domestic joys. We should not live to work, but work to live—live in the home affections, in the knowledge and love of nature, in the delights of reading and contemplation, in the search for truth, and in the worship of the beautiful and good. In urging this view of the object of education, I have presented the only argument needed to convince a fair-minded man that the family which would last must look to the education of its children.

A few words ought to be said on wise marriage, for that wisdom is of as much consequence to family permanence in a democracy as in any other state of society. In the first place, reasonably early marriages are desirable, from the point of view of family permanence; because they give better promise of children, and because the children of an early marriage will be sooner ready to aid the parents or the surviving parent. A farmer who marries at twenty-two, may have helpful children by the time he is thirty-five. A professional man, or a mechanic, who marries at twenty-four, may have a son ready to take up his business by the time the father is fifty; whereas, if he delays marriage until he is thirty-four, he cannot have his son for a partner until he is himself approaching sixty. It is a bad sign that among rich and well-to-do Americans marriage begins to be unduly postponed; but this evil is a limited one, because it affects only a very small proportion of the population, and often works its own cure by extinguishing the families which persistently practice it. Secondly, free selection of mates, under the guidance of mutual affinities and repulsions, is the democratic method in marriage; and biological science indicates that this is probably the best possible way of producing and maintaining a vigorous race. Selective in-breeding, such as has been attempted in noble families in

Europe, has not succeeded; selection superintended by elders, as in France, certainly works no better than free selection; and marriage by commercial arrangement, or by purchase more or less disguised, whether of the woman by the man or of the man by the woman, is certainly not conducive either to family happiness or to family permanence in our day, whatever it may have been in patriarchal or matriarchal times. Every principle of political and social freedom tends to confirm and to establish the practice of unrestricted freedom of selection in marriage, so that we may well believe that American practices in this regard will ultimately become universal. With a view to family permanence and to continuous improvement, there are two directions in which the common American marriage practices might be improved. In the first place, among attractions for either sex, physical strength and constitutional vigor and promise should count for more than they generally do; and among repulsions, constitutional weakness or delicacy and bad bodily inheritances also should count for more. Secondly, engagements for marriage should not be made until the education of both parties has been completed, and until their tastes and capacities have become tolerably well defined. Many ill-assorted marriages result from engagements made before one of the parties has attained his or her mental growth, or has become acquainted with his or her own powers and inclinations.

Suggestions are frequently made nowadays that the human race could be improved by utterly abolishing the institution of the family, and applying to men and women the methods of breeding which are successfully applied to domestic animals. All these suggestions fly in the face of every doctrine of human rights which mankind has been painfully trying for centuries to establish, and which at last it sees recognized by a considerable portion of the race. Moreover, in the domestic animals men have sought to reproduce and to develop certain bodily powers; they have not had to deal with mental and spiritual gifts. They have sought the best trotters among horses, the best milkers among cows, and the best layers among hens. The problem of improving the human race is infinitely more complex; for the main improvements to be sought, although undoubtedly having a physical basis, are improvements in mental and spiritual powers,

the relations of which to the body are by no means understood. To the solution of this more complex and more recondite problem the results obtained in the breeding of valuable varieties of domestic animals contribute hardly anything of value. Meantime, the family remains the most sacred, durable, and potent of human institutions, and through it must be sought the replenishment and improvement of society.

If adequate laws and institutions provide for the safe holding and transmission of property, whatever promotes thrift and accumulation of property in families promotes family permanence. Democracy distrusts exaggerated accumulations of property in single hands; but it firmly believes in private property to that extent which affords reasonable privacy for the family, promotes family continuance, and gives full play to the family motive for making soil, sea, and all other natural resources productive for human uses. Thus democratic legislation incorporates and protects savings banks, trust companies, insurance companies of all kinds, benefit societies, and co-operative loan and building associations, which are all useful institutions for promoting thrift, if they are vigilantly watched and wisely controlled by the state. But the most direct legislative contribution to family permanence, apart from marriage and divorce laws, is to be found in the laws regulating the transmission of land, buildings, implements, wagons, vessels, household goods, and domestic animals, both by will or contract and in the absence of will or contract. The great majority of families hold no other kinds of property than these, the ancient and universal kinds. Stocks and bonds, forms of property which have practically been created within forty years, are held only by an insignificant proportion of families; so that legislation affecting unfavorably the transmission of these new forms of property from one generation to another could not be very injurious to the family as an institution. For example, succession taxes on stocks and bonds might be imposed without serious harm. On the other hand, any legislation which should destroy or greatly impair the inheritable value of land, or of improvements on land, would be a heavy blow at family permanence, particularly in a state where land is for the most part owned by the occupiers. The farm, the village lot, and the town

or city house with its appurtenances and contents, constitute transmissible family property in the vast majority of cases. In the interests of the family, democratic legislation on inheritances should chiefly regard, not the few estates which are counted in hundreds of thousands of dollars, but the millions which are counted in hundreds of dollars. Inheritances of a few hundreds of dollars have a great importance from the point of view of family permanence; for most inheritances are on that scale, and five hundred dollars means a favorable start in life for any young working man or woman. The proposal to destroy by taxation the transmissible value of land seems to be aimed at the few unreasonably rich, but it would strike the frugal and hard-working millions.

Lastly, family permanence is promoted by the careful training of successive generations in truth, gentleness, purity, and honor. It is a delightful fact that these noble qualities are in the highest degree hereditary, and just as much so in a democratic as in an aristocratic society. They are to be acquired also by imitation and association; so that a good family stock almost invariably possesses and transmits some of them. Truth is the sturdiest and commonest of these virtues; gentleness is a rarer endowment; purity and honor are the finest and rarest of them all. In a gentleman or a lady they are all combined. Democratic society has already proved that ladies and gentlemen can be made much more quickly than people used to suppose; but since it has been in existence hardly one hundred years, it has not yet had time to demonstrate its full effect in producing and multiplying the best family stocks. It has already done enough, however, to justify us in believing that in this important respect, as in many others, it will prove itself the best of all forms of social organization.

Does any one ask, Why take so much thought for the permanence of superior families? I reply that the family is the main object of all the striving and struggling of most men, and that the welfare of the family is the ultimate end of all industry, trade, education, and government. If the family under a democratic form of government is prosperous and permanent, the state and civilization itself will be safer and safer through all generations.

CHARLES W. ELIOT.

## THE HUMANITIES.

THE phenomena with which the anthropologist must deal are multifarious and complex. In order that they may be understood and that their teachings may be wrought into a philosophic system, they must be grouped. The region of ungrouped data is mental chaos; that of properly-grouped particulars is the realm of science. The way from chaos to science is as long as that from atoms to a world. In the course of evolution nature integrates phenomena, and they are thus naturally grouped. By discovering such groups, man is able to deal with many of the phenomena of nature. But the human mind has invented another plan by which the many are grouped, namely, the method of classification. By integration, unlike things are grouped, and the higher the integration the more unlike are the interdependent parts. By classification, like things are grouped, and the higher the classification the fewer are the particulars upon which it is based.

In the study of mankind both of these processes are pursued. The integration of men as tribes and nations is discovered. To consider mankind in such groups only, is greatly to restrict investigation. This arises partly from the fact that the tribal and national groups are not natural or genetic. No tribe or nation can be found which we may reasonably suppose to have descended from a single body of people living in remote antiquity, when the first germs of culture were planted. As these tribal and national integers do not fully meet the requirements of scientific groupings, many scholars have sought to classify mankind, and thereby to obtain a grouping that would serve the purposes of science. Thus have arisen the attempts to create a science of ethnology. Using the term in this sense, as an attempt at a classification of mankind by races, ethnology has failed to become a science. No ethnic grouping which has been proposed has been adopted by any large body of scholars, even

as a tentative system to be further developed; but every scientist who has taken up the subject in a comprehensive manner has reached a conclusion differing from others, and has become the author of a system which other scientific men will not accept. There are no ethnic groups of mankind which can be satisfactorily demarcated. The stream of human life is not a river with branches; but multifarious streams have rolled down from high antiquity to the present, coalescing and parting again and again, until the world has been covered with a network of streams of blood which science cannot unravel. In the animal kingdom below man, species, genera, and orders have been differentiated, but the process of evolution has not brought this about with man. The course of human evolution is not toward the differentiation of stocks, but toward their amalgamation.

In the course of human evolution man has become a creator, and his power of invention, slowly developed through the ages, has created the chasm between him and the brute. The course of invention may be marked off into stages of culture. The brute is not wholly devoid of invention, but the brute world has never reached such a stage of culture as to repeal the cruel law of evolution known as "the survival of the fittest in the struggle for existence." Human invention, on the other hand, steadily from the lowest to the highest estate of man, more and more contravenes that law and substitutes therefor the processes of evolution known as culture.

The processes of human evolution being not biotic, but cultural, the study of mankind gives rise to a new realm of science, which is denominated "anthropology." It might well be called the science of culture, and perhaps still better the science of the humanities. The classification of mankind fails, because the cultural conditions and agencies of human progress have emancipated man from the laws of biotic evolution under which species are differentiated. But while we cannot classify men, we can classify the humanities; and I propose to give an outline of such classification.

The arts of life have for their purposes or ends the acquirement of food, clothing, and shelter, and the preservation of health. Among the lower animals the differentiation of specific activities

leads to a differentiation of species, but with mankind no such effect is produced. Farmers, tailors, house-builders, and doctors do not constitute different races or species of men, because of the admixture of streams of blood. Among the lower animals the process of differentiation makes the individuals enemies; among mankind division of labor is the basis of mutual assistance, and leads to the establishment of justice. The process of differentiation among the lower animals is adaptation to environment; the process of differentiation of industries among men puts them in command of the powers of nature, and man adapts the environment to himself. He creates a new food environment, and supplies himself with the products of all climates; he clothes himself with furs in the arctic zone, and with gauzes in the tropics; he incloses himself within walls to defy the storm, and creates a fireside Summer in his home, or he erects vine-clad bowers to screen himself from the fierce rays of the equatorial sun. When wounded, he heals himself, and by his own arts he wards off disease. So far as human art, in its development, excels the natural activities and arts of the lower animals, to that extent man has repealed the law of adaptation to environment. The animal is the creature of environment; man is the creator of environment.

The higher orders of animals have both arts and institutions, but they are so crudely developed as to be inefficient agencies of evolution. Animals also are endowed with minds. When we carefully study the psychic activities of brutes we are astonished at their intelligence, and yet the psychic chasm between mankind and brute kind is profound. The psychic activities are of three grand classes; namely, emotive, intellective, and conative. The emotive faculties are essentially passive, though they have expression in activities; the intellective and conative faculties are active. In the intellectual nature of man, the law of the survival of the fittest seems to apply as an agency for human evolution. Those most endowed with intellectual faculties seem to preserve their lives; those least endowed seem first to succumb to the enemies of health. This doctrine is often accepted by anthropologists. The theory contains some truth; but there is an obverse side, and it is possible to maintain, with a

show of verity, that while intellectual advancement may be progress in health and long life, such progress may perhaps be annulled, in the aggregate of the species, by the diminution which arises in the rate of multiplication of the species. The diminishing reproduction more than offsets the increasing protection which arises from mental acquisition. A general law of biotic life is that rate of multiplication is inversely proportionate to degree of evolution. The lowest organisms multiply by myriads; the highest organisms do little more than reproduce their numbers. The same law of decreasing reproduction with increasing culture is observed among mankind. There are reasons for this. Among savages and barbarians, and even among the less cultured in civilization, the pains of maternity are less severe than among human beings of higher culture. In the advanced stages of culture the more highly developed nervous organism pays a penalty of pain which has its compensation only in the fact that the offspring are more highly endowed. Another reason inheres in the fact that, in the more highly organized life which culture brings, the pains and pleasures of existence are more keenly felt and more carefully weighed; and this leads to prudential regulation of the fountains of life. In savagery, to a large extent, unbridled passion governs the rate of reproduction; in the highest culture intersexual life is more thoroughly governed by reason.

The prime condition under which the survival of the fittest is efficient as a method of evolution, is great multiplication of the individuals of each species; and the rate of evolution is largely dependent upon the number from which the "natural selection" is made. The slow rate of reproduction among mankind, in the highest culture, makes void the law of natural selection, for a greater proportion must be preserved to continue the species with undiminished numbers. If human progress should depend on this law instead of on the diffusion of culture, barbarism would overwhelm civilization with the passing generations. It is hardly necessary to weigh in the scales of judgment these opposing tendencies to progress, for though the conclusion may be reached that some progress does indeed result through the survival of the fittest intellectually, yet the rate of such progress is so

minute, compared with that derived from other agencies, that it may be neglected.

Biologists recognize the great law of exercise. That organ develops which is used; that organ dwindles and ultimately becomes atrophied which is unused. This is the great agency of intellectual progress. The mind grows by employment, and enlarges with the scope of its activities. But this is culture. Intellectual evolution, therefore, depends upon the exercise of the mind in the arts of life, in the arts of sociology, and in the arts hereafter to be indicated.

Languages constitute the first great group of psychic activities or arts. In the study of the languages of the lower tribes of mankind, and in the history of the earlier stages of the civilized tongues, a glimpse is obtained of a vast multiplicity of languages in the first stages of culture throughout the world. The course of culture is not more clearly marked in any field of research than in the history of the unification of languages. With the progress of culture the number of languages steadily diminishes, and a greater number of people are able to communicate through the agency of a common tongue. Notwithstanding the unification which the history of languages presents, a great number of more or less discrete tongues still remain, and these languages can be classified in such a manner as to show genetic relationships. The languages found among savage and barbaric tribes can be classified more satisfactorily than the languages of civilization, because they are less composite. The great languages of modern civilization can be classified to exhibit genesis only to a limited degree, from the fact that each has many origins. Each has elements more or less common to all, and each has elements derived from diverse tongues now lost or nearly lost. Much progress has been made in the classification of these tongues, yet the work is far from being complete. A language is a body of words which can be integrated in spoken and written speech to express the thoughts and opinions of people who understand it. Thus the verbal elements of a language may be studied by integrated groups, and this is done in every case where a language is partially or completely mastered. Then a classific study of each language may be made

by grouping its words as parts of speech, and by grouping its collocations of words as phrases and sentences of various classes. Again, it has been already shown that the languages themselves may be studied by classific methods, because they can be grouped in such a manner as to exhibit their genesis more or less satisfactorily. The phenomena of languages are so vast that any extensive knowledge of the languages of the world would be unattainable, even to the most diligent scholar, were it not possible to group these phenomena by the discovery of integrant and classific characters. By this discovery the particulars with which the philologist deals are reduced to system, and the systematic arrangement of linguistic phenomena is the science of languages.

It may be shown that through the development of language the method of evolution by the survival of the fittest is somewhat re-enforced, for he who can use and interpret language properly is equipped with the means by which he may avoid and avert dangers; but again there is an obverse side, for the psychic growth which the high acquisition of language implies brings with it a decreasing rate of reproduction of the species. Again the weighing of inversely-acting agencies is required; and again the result reached is of so small magnitude, in comparison with the other agencies of progress, that it may be neglected.

Language is one of the great agencies of intellectual progress, and it operates both actively and passively. Through the agency of language the mind is enabled to occupy itself in the evolution and expression of thought, and through the medium of language the thought of many may become the property of each. Thought is not consumed by use, but grows and multiplies with the individual thinker, and by language is communicated to others without diminution by the original thinker. Language is the great multiplier of thought, as it propagates it from mind to mind and from generation to generation. Thus, through the agency of speech, mind is exercised and developed. Woe to the world if the growth of wisdom should depend upon the death of fools and upon the survival of the fittest.

The arts of amusement must next be considered, as their study will lead to a clearer comprehension of certain higher groups that have to be presented. The arts of amusement are

deeply rooted in the biotic nature of man, for they spring from a superabundance of vital activity. In the laboratory of nature an excess of life is evolved, and this surplus is used for pleasure; and if it is used with judgment, life itself is enlarged. All life that can properly be used for pleasure is put at interest, and the rate is high and often compounded. This is especially true where the pleasures involve biotic activities, and through them appeal to the emotions. Amusements or games are not only founded on biotic life, but also spring from the social life, and have some of the characteristics of institutions, to which they are, perhaps, as closely allied as to the arts of life. The amusements of a more intellectual character are agencies for mental development. The effect of the grand aggregate of amusements is to develop body and mind alike. Compare the development that would arise through generations of athletes engaged in sports, with the development that would arise through generations of toiling men, from the survival of the fittest. He who has witnessed the organized sports of the savage and barbarian, the years of physical training through childhood and early manhood to which the youth of a tribal state are subject, the development of sports in all stages of civilization, and has discovered that every village site in savagery, like every college campus of modern life, is a training ground for athletic activities—he who has observed all this will surely discover that biotic vigor waits not on the death of idlers and imbeciles, but follows hard on physical training, which is one of the methods of culture.

The decorative arts historically spring from the arts of amusement. They are founded on the arts of life and are designed to beautify them. Man seems never to be content with any useful art, even when the form of greatest utility is attained; something more must be added to satisfy his æsthetic sense. The fur robe of the savage must be fringed, the dinner pot of the forest crone must be ornamented with the figures of beasts, and the engineer who drives the locomotive against the wind must decorate it with a flag. Everywhere, in all the products of the industrial arts, decoration is to be found. Fields are beautified with bordering trees, landscape gardening embellishes every home, clothing is chiefly decoration, architecture is an ounce of

shelter and a pound of adornment, and the art of beautifying the marts of trade makes the street side a panorama of beauty. Modern civilization is more than half decorative. All this arises from the fact that in higher civilization the wants of biotic life are less keenly felt than the wants of psychic life. Sensations and appetites give place to emotions, in the control of conduct.

No small portion of human evolution arises through the intellectual culture attendant upon the decorative arts, and the struggle for existence among brute kind is replaced by the struggle for adornment among mankind. In the struggle for adornment, the very means of existence are sometimes lost, and often dissipated in pandering to artificial appetites. When men wreck themselves in this manner, almshouses and hospitals are built to receive them, to secure the survival of the unfit. Such faith in the methods of culture exists everywhere in the human breast, and in such detestation is the law of natural selection held in society. Sweet charity and the principles of natural selection live not in the same heart.

The æsthetic arts spring from the decorative arts, and appeal to the highest emotions of the soul. They partake in part of the nature of the decorative arts and in part of the nature of linguistic arts. They are both emotional and expressional, and represent feelings and thoughts. The æsthetic arts are sculpture, painting, music, the drama, romance, and poetry; and often these arts are compounded. No activities exemplify more clearly the laws of human evolution than the æsthetic arts. They all begin low down in savagery, and are deeply implanted in biotic, social, and psychic life. The activities of the brute are developed through the survival of the brutes that are best fitted to perform those activities; but the æsthetic activities of mankind are developed wholly by culture, and are dependent, not upon the survival of the fittest artists, but upon the general culture of æsthetic emotions and capacities in the human race, in its various stages of progress. There is no species of musicians, no hereditary race of sculptors, no species of painters, no differentiated hereditary body of dramatists, no hereditary order of romancers, no specialized biotic family of poets; but artists spring from all the people and interpret to the people.

The transformation of biotic differentiation into industrial differentiation, or division of labor, has other and far-reaching consequences. First, labor becomes ever more efficient, as men can more easily supply their wants on account of the progress of industries. With the development of industrial arts there is a concomitant development of interdependence, in such a manner that each man is dependent upon many others. Any one man in civilization thus becomes dependent upon the activities of vast numbers of persons throughout the world; and this interdependence is the agency which transforms egoism into altruism, for every man is as much interested in the welfare of others as the brain is dependent on the stomach, the hand on the eye.

The differentiation of species among the lower animals causes the species to compete with one another for existence, so that one species preys upon another. Predatory competition results therefrom, and as animals devour one another, the law of the survival of the fittest is sanctioned. But the differentiation of industries does not lead to cannibalism, and there is no devouring competition as a result of the development of the arts of life; on the contrary, there is an increase of interdependence, which leads to the development of justice. Punitive justice is born of crime; remedial justice is born of tort; but justice unqualified by any other term is born of interdependent industries, and may be defined as due reward for service. Right implies a correlative duty, as the upward direction implies the downward. Right, with its correlative duty, springs from mutual service.

The interdependence of mankind resulting from the differentiation of industries, leads to the establishment of institutions, and social organization is thus produced. This social organization is expressed in the development of states, as tribes and nations, with all their subordinate units. In addition to the governmental units of various orders comprising the state, there are many other associations of men for industrial, social, and religious purposes, all to a greater or less extent recognized and regulated by the state, and thus forming integral parts of the state. The state, thus primarily organized on the differentiation of industries, has its organization further developed through the growth of multifarious and complex institutions; and this organization is the

subject matter of the science of sociology. Sociology may be defined as the science of institutions. There are two grand classes of institutions, operative and regulative; and regulative institutions are legislative, administrative, and judicial. There are three great classes of sociologic arts; these are the arts of government, the arts of diplomacy, and the arts of war. These also are institutions, in that the individuals who take part therein are organized.

We have seen that the development of industries effects a revolution in the laws of evolution as they apply to mankind. The development of institutions is another agency taking part in this revolution. We have seen also that in animal evolution predatory competition is one of the efficient agencies. Institutions are primarily established to preserve peace; ultimately they accomplish their purpose by establishing justice. The very end, then, for which institutions are organized, is to destroy predatory competition. Thus the law of the court nullifies the law of nature. One brute attacks and devours another, and a step in biotic evolution is accomplished thereby. But murder is prohibited by law, and the enactment of the law is a step in human evolution. These steps compare with each other as the path of a worm and the orbit of a world.

Opinions are in part inventions and in part discoveries. The human mind is forever striving to reach the truth, and all along the course of culture truths are reached. But in the various stages of philosophic evolution there are realms of phenomena imperfectly discerned, identified or discriminated, and imperfectly arranged in integrant groups, where real cause and effect are misunderstood and improperly classified, where genetic relations are misunderstood. Thus, in integrant grouping, cause and effect are invented, and in classific grouping, genesis is invented. So it happens that opinions are in part inventions and in part discoveries. Systematized opinions constitute philosophies, and all philosophies are compounded of inventions and discoveries. If philosophies were wholly inventions, then philosophies should be classed as psychic arts; but if we admit that they contain any part of truth properly reached by discovery, to that extent they are taken out of the art category and belong to the category of

fundamental sciences. In anthropology there are three of these fundamental sciences; the first is sociology with its arts, the second is psychology with its arts, and the third is philosophy with its arts. Sociology springs from biology, which is the science of life, and embraces all living things; psychology springs from biology and sociology; while philosophy springs from psychology. A philosophy is an integration of opinions, and a philosophy of philosophies is a classification of philosophies; such a classification is true if it correctly exhibits their genesis.

Three great classes of philosophies exist; the mythologic, the metaphysic, and the scientific. Mythologic philosophy seeks to interpret the phenomena of the universe by explaining them as the activities of unseen spirits and the work of sorcerers. In such a philosophy many of the facts or phenomena of nature are properly perceived and proximately explained with truth; but the ultimate explanation is wholly invented, and mythology is largely an art allied to romance. Metaphysic philosophy supposes that language has occult power, and that by linguistic forms absolute truths may be reached—that man by the use of language can discover and demonstrate the truth independent of perception and induction. In such philosophies the generally-accepted truths of science are incorporated, and they often include many of the invented opinions of mythology. Such philosophies, therefore, are composed in part of inventions and in part of discoveries; but their basis is dialectic—they rest on syllogistic logic, which deifies the "word." Scientific philosophies constitute the third class. They embrace the known phenomena, the discovered integrations and classifications, and claim to have reached the truth, but concede that it has been discovered only in part. It is always granted that scientific philosophies are thus imperfect, as the whole truth has not yet been discovered; and most scientific philosophers go one step further, and claim that their philosophy can never be perfected, because of the limits put upon the human intellect. But if we examine the scientific philosophies that have appeared in any stage of culture, we find that many of the opinions of which they are composed are erroneous; and many of the opinions held in the present scientific world fail to command the universal assent of

scientific philosophers. Perhaps scientific philosophy is never fully divorced from mythology and metaphysics; occult actors or agencies are often recognized, and dialectic reasoning is often employed. Mythology assumes to be a perfect philosophy. Metaphysics also claims perfection. Science, with modesty, largely recognizes its own imperfections, and yet is not wholly devoid of vain assumptions.

What part does the evolution of philosophy play in the evolution of man? Like psychology, of which it is the grand product, its effect is to transform animal evolution into human evolution—to replace the law of the survival of the fittest by the law of culture. The statement of this fact would be similar to that made in relation to psychology. Its use here would necessitate only a change of terms. It need not, therefore, be repeated. The philosophic arts are the arts of education, the arts of investigation, and the arts of religion. Theology is a part of philosophy, and religion is a theologic art.

A hasty review has thus been made of the hierarchy of anthropologic sciences and their concomitant arts. But the knowledge of an art is itself a science, though of the second degree. Then there are arts of arts, as the manufacture of agricultural implements is subsidiary to agriculture, which is an art of life; as printing is subsidiary to language, which is a psychic art. The knowledge of one of these arts is also a science in the second degree; and in like manner we may have subsidiary arts and sciences to any desired degree.

In the foregoing exposition an attempt has been made to emphasize the following particulars:

I. Anthropologic activities spring from biotic activities, and are exhibited by brute kind as well as by mankind; but these activities, when highly developed, as in civilization, differ in such a degree that a complete transformation is wrought.

II. When these activities are thus transformed they can be classified to exhibit their genesis, as follows: 1. Technology, or the science of the arts of life, which is the basis of social transformation. 2. Psychology, or the science of the soul. The psychic activities may be classed as emotive, intellective, and conative. In intellectual life the following arts are evolved:

*a*, the arts of language; *b*, the arts of amusement; *c*, the arts of decoration; *d*, the fine arts. 3. Sociology, or the science of institutions; classed as *a*, operative institutions; *b*, regulative institutions. In social life three classes of arts are developed: *a*, of government; *b*, of diplomacy; *c*, of war. 4. Philosophy, or the science of opinions. Philosophies may be classed as mythologic, metaphysic, and scientific. Out of philosophic life are evolved the following arts: *a*, the arts of education; *b*, the arts of investigation; *c*, the arts of religion.

III. The progress of mankind, or human evolution, differs from animal evolution, in that the law of the survival of the fittest in the struggle for existence is largely repealed in its effect upon man, and is superseded by the laws of culture, which depend on human endeavor.

J. W. POWELL.

## PITY, GENUINE AND SPURIOUS.

MORE than one article has appeared of late in the FORUM and in other periodicals, denouncing the "luxury of pity," and in a general way deprecating the modern prevalence of the emotion. I think it may be useful to endeavor to distinguish, a little more clearly than the writers of these papers have done, the pity which is a virtue from the pity which is a vice. We are all familiar with the story of the child who was shown a picture of the Roman arena, where Christian martyrs were being devoured by wild beasts. The child whimpered as he gazed at the fearful spectacle; but his father's delight at this sign of precocious grace was dashed when the infant pointed to a disengaged cub in a corner of the picture and remarked, "That poor little lion hasn't got any Christian to eat!" I myself have known a mother to narrate to her small son an instructive fable of a naughty boy who threw a stone at a robin and broke its leg, for which delinquency his father gave him a whipping. Juvenile sympathy was here also misplaced. The son looked distressed, and murmured with deep fellow feeling, "Poor little boy!"

Precisely on these lines of childishly-misapplied pity much of the sentiment of the present day proceeds. Men are perpetually to be heard commiserating the lion who has no Christian to eat, and the boy who has been whipped for throwing stones. So vehement is the sympathy of the masses for eminent criminals, that the recommendation of a spotless record obviously offers no sufficient counter attraction to one of variegated crime, culminating in red-handed murder. Half the capital sentences passed of late years in Europe and America have merely opened flood-gates of public sympathy, which thenceforth poured down the columns of all the newspapers till the interesting ruffian was either reprieved or hanged.

It is desirable to trace the cause of this notorious scandal, and to recognize, if possible, how the pity of the multitude comes to

be so often warped and misdirected, withheld from the innocent victim of crime and bestowed lavishly on the criminal. In the first place, we may gladly admit that our age is one wherein humane feeling abounds as it has never done hitherto in the history of mankind. The output from the mine of the human heart is greater than in former generations, and consequently we have more pity on hand to be wasted.

Secondly, we may trace a good deal of the misapplication of pity, in cases of capital crime, to the abnormal attention directed by the press on the convict, as if he were a creature exhibited with the aid of a microscope and a magic lantern to an admiring audience. The poor victim lies silent, and is dismissed necessarily in a few paragraphs, seeing that his fate is sealed and that he cannot possibly be "interviewed." But the living criminal, his antecedents, his motives, his guilt, his chances of reprieve, what he says, what he writes, what he eats, and how he sleeps, afford illimitable "copy" for the reporter, the interviewer, the leader-writer, and the outside correspondent; and among them they draw the thoughts of thousands to the condemned cell, and to the man therein who awaits his dreadful doom—a doom possibly to be modified by their exertions in arousing public sympathy. Now, modern Christendom is good-natured, if nothing better, and it cannot think very much and often of a man, or *a fortiori* of a woman, without developing a certain amount of sympathy which, by and by, with the help of the contagion of the emotions, rises higher and higher, till men are found offering their lives for the murderer, and, what is still more astonishing, proposing to marry the murderess.

But the third cause of the common misdirection of pity in these days, is more serious and more deplorable than the foregoing. It is, I think, beyond doubt, a general relaxation of moral fiber, which is traceable in many departments of activity. As I have maintained in another paper in the FORUM,* moral indignation burns feebly in these days; nay, is almost moribund. The reaction from that puritan strictness which lingered yet among our grandfathers, and the loosening even of the milder bonds of authority held by our fathers, have produced finally a young

* Vol. IX., p. 180.

generation unbroken as so many colts to any yoke. Concomitantly with lack of discipline, luxury has entered into the daily life of the well-to-do classes to an extent undreamed of in former years, till the general result is something which a physiologist might diagnose as "fatty degeneration of the heart." Busy in laying beds of rose leaves for ourselves and our children, and in eliminating from them the smallest thorns, or even the proverbial pea of the fastidious princess, we are not in the frame of mind to wax righteously indignant at the failings of our neighbors. The stern old Roman *virtus*—which was interpreted *pugnans pro æquitate*—has softened down into that all-round, happy-go-lucky indulgence, that slovenly good nature, which costs no self-sacrifice, and which makes no invidious distinctions between ill desert and good desert.

There is a certain condition of the will, produced sometimes by morphine, and less often by alcohol, chloral, or nicotine, which presents to the observant eye an intensified sample of this modern demoralized good nature of which I speak. The morphine maniac is reduced to that condition which necessitarians would have us believe is the inevitable lot of all men; namely, to be the slave of circumstance and inclination, unable to determine any action with moral freedom, or to choose the right for its own sake independently of the pressure of desire and of fear. In the case of the morphine maniac, scarcely a vestige is left of the true freedom which is the supreme birthright of a rational being. He cannot rouse himself to conquer his pernicious habit or to do the work of life steadily. As Coleridge confessed of himself, when any action is presented in the light of a duty, he is "instantly seized with a sense of inability to perform it." But he is good-natured; quite wonderfully good-natured. After a recent dose of morphine (he grows a little irritable after an interval), no offender exists for whom he does not drop the pitying apostrophe, "Poor fellow!" and for whom he is not "sorry" and willing to sign a memorial or a contribution list.

Very similar, in a lesser way, have been the results, on thousands of minds, of the various influences above described; and to them must be added two changes in opinion which have detracted much from the clearness of apprehension of moral dis-

tinctions in the modern mind. One of them is the introduction, through Darwin and Spencer, of the view that conscience is only an hereditary prejudice in favor of conduct useful to the tribe; the other is the general ebbing of that faith in a future life which alone can give to right and wrong their just and immeasurable significance. Well saith Tennyson:

> "The Good, the True, the Pure, the Just,
> Take the charm 'forever' from them, and they crumble into dust!"

Thus it comes to pass that, without early discipline and the habits of reverence which come of discipline, enervated by excessive ease and continual pleasure-seeking, relieved of the solemn view of duty as the "daughter of the voice of God," and led to look on the life beyond the grave as a dream, the men and women who have thoroughly undergone the influences of the time have no ambitions left but first to grow rich and then to enjoy riches. Sympathy with strenuous moral effort of any kind is not to be expected of them. They have no admiration for those

> "Who, rowing hard against the stream,
> Saw distant gates of Eden gleam,
> And did not dream it was a dream."

They float with the tide, and never see any gates of Eden. Having no hunger or thirst after righteousness, they cannot possibly feel much disgust at unrighteousness. The profligate, the swindler, the perjured friend, the adulterous wife, the man who spends his days in cruelty, arouse in them a certain languid interest as curious studies of human nature, rather than wrath and indignation as evil-doers; and this languid interest is akin to pity, just as pity is proverbially akin to love.

Such, I apprehend, is the *rationale* of that spurious pity which displays itself in popular enthusiasm for criminals, in proposals of marriage to female poisoners, and in schemes of legislation to rob the industrious Peter to pay the idle Paul. This pity I classify as a vice—the mere outcome of demoralized conditions of the mind and will. If this be so, how shall we define genuine pity, the pity which is a virtue? By a beautiful law of nature, at the time of life when the faculty of enjoyment on our own

account of the good things of earth begins to wane, a new sense of vicarious pleasure springs up. The youth knows and feels little of reflected enjoyment, but the older man of kindly disposition revels in it. The sight of some child disporting itself—

> "A little singing, dancing elf,
> Singing, dancing by itself,"

of some lark singing in the sky, of some playful brute gambolling in the Spring grass, affords him a new and very delicate pleasure. By degrees, as age creeps on, if he haply taste this pleasure often and grow mellow, as is the normal order of human ripening, such vicarious enjoyment becomes the chief solace of his latter days; and the last art which he learns—"*l'art d'être grandpère*"—brings with it the sweetest satisfaction of all. Thus the reflected happiness which is the moonlight of life suffices to brighten the world with a mild radiance of its own.

The correlative of such vicarious pleasure is vicarious pain. This, too, is usually felt somewhat late among the emotions, for youth is self-centered and consequently callous. But when the feeling is experienced, and the man learns to "weep with them that weep," as well as to "rejoice with them that do rejoice," the character and direction of his pity will be determined for good or for evil, toward wholesome or unwholesome sentiment, according to the moral tenor of his own mind. Is he careless of right and wrong, and reduced to the low moral level of slovenly good nature? Then his pity will be of that spurious and vicious sort which we have been studying. Is he, on the contrary, a conscientious man, revering justice and truth above indolent good nature? Then his pity will be of the genuine kind, and will inspire him with truly beneficent action. Such a man feels pity for the criminal, but because of his guilt, not because of his punishment; and his exertions are directed, not to make law a derision, but to make its execution so sure and so strict that lawlessness shall be overawed, and that crime shall be prevented. He may and will regret the stern necessity of punishment; but his deepest compassion will be, not for the criminal's bodily pain, but for his moral degradation. This is the pity which is a virtue, and it belongs only to him who merits the grand old names of "the Just," and "the Righteous." It is because so few are

just and righteous, and because so many are only good-natured, that spurious pity prevails so disgracefully in Christendom.

Let me say a few words concerning genuine and righteous pity, leaving the other out of sight; and let me ask whether any man dare deliberately to call this real pity by the name of "luxury." When a human heart is touched to the core by pity, the sense of grief or indignation at the woes or the wrongs endured by the sufferer would appear to be more vehement than that which is felt from any personal pain or injury. Even the man's own eternal interests seem, in some wonderful cases, to recede altogether into the background of the thoughts of the most pious. Like Clarkson pleading for the slave, he has "no time" to think of his own salvation. Like Paul, he would willingly be "accursed" for the sake of the brethren. One such man, in whom pity was incarnated, was the "Good Earl" of Shaftesbury—

> "The friend of all the friendless 'neath the sun;
> Whose hand had wiped away a thousand tears;
> Whose eloquent lips and clear strong brain had done
> God's holy service through his four-score years."

When he was speaking to me one day, in his study, of the wrongs of young girls, which he had just been investigating, the tears came to his eyes and his voice trembled. After a pause he added, "When I feel how old I am, and know I must soon die, I hope it is not wrong, but I feel I cannot bear to go and leave the world with all the misery in it." That was the most Christ-like thing I ever heard from living lips; but I doubt not many another true philanthropist, like my late honored American friend, Charles Loring Brace, has felt the same divine regret. If the future world offer no God-like work for such men to do, Heaven can be no Heaven to them. And if, on the other hand, when the scales of mortality fall from their eyes, it is revealed to them why all the pain of earth has been permitted, and in what ocean of joy it is to be swallowed up at last, when the wrongs of man and nature, of suffering humanity and of tortured brutes, shall be all wiped out forever—then, and then only, will they have entered Paradise. Thrones and harps and all conceivable glories and delights for themselves would never constitute their Heaven, even if rolled out into the eternal years.

That the sentiment of purely unselfish pity possesses a certain sweetness, is not denied; for, just inasmuch as it is unselfish, it brings that sense of largeness and freedom, like the air of the mountains, which belongs to all the nobler emotions; precisely as a sense of stifling and constriction is inseparable from mean and selfish feelings, even at the moment of their completest gratification. But this is not to say that real pity is not, in the main, painful in the extreme; nay, that it does not sometimes amount to anguish. Probably no human feeling more nearly approaches to agony than passionate pity. The *Mater Dolorosa* is of all ages, and is the most pathetic picture in the long gallery of sorrow. La Rochefoucauld says, in one of his bitterest jeers, "*Nous avons tous assez de force pour supporter les maux d'autrui.*" No! Men have *not* all enough strength to bear the pangs of sympathy with their neighbor's pain, or even to think they could themselves endure it better than he. The thought of the sufferings of the poor men and women whom they have seen in hospitals and in workhouse infirmaries, of little children starved and beaten, of animals mercilessly tortured, is almost more than they can bear. Only in vigorous persistent exertion to mitigate or to abolish such woes and wrongs do they find an anodyne for their own aching hearts.

If we go back to seek the origin of pity by Darwin's method, we shall find that to identify it, as we are wont to do, with "humanity," and to use the words as convertible terms for the same sentiment, has been a somewhat exaggerated compliment to our own human race. Pity begins a good deal below the level of the genus *Homo*. The recently-published stories of storks which returned to their burning nests and were consumed with their fledgelings, of the cat which rescued successively three of its kittens from the flames of a theater, and which, returning scorched and blinded to seek the fourth, perished in the effort—these, and scores of other instances, might be quoted of the heroic self-forgetting pity of the parent brute and bird. Nor do animals pity only their young, though doubtless the sentiment with them, as with us, begins with the compassion of a mother. Darwin's famous old ape, who rushed in front of his dreaded human enemies to rescue the young one, must have known in-

tense pity. Among domesticated animals, no evidences of pity can be stronger than those which nearly all dogs, and many cats, exhibit when their owners are in distress. Many instances are on record also where tame elephants, horses, and dogs have showed pity and helpfulness to their own kinds; as the reader may see, *inter alia*, in Allix's charming new book, "*L'Esprit de Nos Bêtes*," in Houzeau's "*Les Facultés Mentales des Animaux*," * in the Rev. J. G. Wood's last book, and in my own essay in the "Quarterly Review" on "The Consciousness of Dogs." † A glance at the testimony thus presented is enough to prove that we have no right to arrogate to our own race a monopoly of the sentiment of pity by calling it "humanity." Nevertheless, in the comparative frequency of its display among civilized mankind, in its larger scope, and in its vast practical extension among the thousand phases of philanthropy, we find sufficient justification for taking "humanity" to mean "human pity *par excellence*." In this department we can perceive that man has distinctly risen above his brute and savage ancestry, and just so far, we must believe, has approached to the divine ideal.

Real pity, as I have endeavored to describe it, is not only a virtuous sentiment; it is that sentiment without which no social virtue of beneficence can be rightly carried out. For any man to stretch his hand to relieve his brother's wants without sympathizing with him, is an insolence; his offers of help should spring from his own heart touched with pity. Only in right of such fellow feeling should he presume to offer his succor to the suffering and unfortunate. The heartfelt pity is the acceptable sacrifice; the physical benefits which it brings in its hand only carry out its meaning. The poorest of us would abhor to receive relief for our wants brought avowedly from mere sense of hard duty, or to be nursed in sickness by a woman who should tell us she did it only "*pour faire son salut*." The soul which never feels pity, if any such there be—even Napoleon felt it once for a wounded horse—might possibly be a very gifted soul, learned, scientific, the creator of beautiful works of art; but all the same it would be no better than a spirit from the nethermost pit, cursed with eternal impotence to feel as a man.

* Vol. II., p. 40. † Reprinted in "False Beasts and True," p. 134.

But the faculty of feeling pity is not held by mortals by any inalienable tenure. We are not sensitive to vicarious pain uniformly or indifferently, whether we labor to relieve the pain which we witness or turn from it to more pleasant interests. We can cause our faint sparks of pity to die out in the easiest way, merely by neglecting to fan them. Probably every man's susceptibility to true and keen compassion varies greatly according to his bodily condition, and according to the freedom of his thoughts or to their absorption in other concerns. At some stages of illness we have little pity to spare for other people's sufferings, and at some degrees of ardor in pursuit of our own objects we have no room in our minds for compassionate reflections. In this latter respect the deplorable result is observable, that the most active brains are, almost by the hypothesis, excluded from the range of the more fervent sympathies, unless, by fortunate chance, the activity has been started on the lines of those sympathies. Mr. Casaubon will always be the coldest of husbands; and the allegory of "Genius and Love" will be rehearsed perpetually till men shall learn that "to understand all mysteries and all knowledge," to be the greatest painter, sculptor, mathematician, or physiologist of the world, and yet to lack Ἡ ἀγάπη, "profiteth nothing."

Here, then, is the lesson I would fain my readers should draw from this brief study. The power to feel pity is one which we must carefully cherish unless we desire our hearts to become ossified. From childhood to old age the danger remains. We may "quench the spirit"; we may become deaf to the cries of pain; blind to blood and tears; absorbed in pleasure, in building a "palace of art," in pursuing wealth, or knowledge, or power, or any of the hundred objects of human ambition. Pitilessness is an armor preserving the wearer from many wounds, and it is an easy and rapid thing to incase ourselves in it. We have only to resolve not to feel for any creature save Number One, to make our selfishness quite complete in the region of sentiment, as well as in that of practical action. Thus resolving, we may shut up our hearts almost as readily as we close our eyelids. St. Hilary Loricatus, so runs the legend, scourged himself so perpetually that his skin became like the hide of a rhi-

noceros. But no such painful methods are required to render ourselves pachydermatous as regards the pains of other people. Of course, when we shall have extinguished in ourselves the sense of pity, and shall have attained the desired state of induration, we shall have lost simultaneously all the social joys of life, and, in truth, every pleasure except the crude gratifications of the senses. Sympathy with others made their praise so delightful, their love so dear. Love and glory will henceforth have no meaning for us. We cannot put off the pains of sympathy and at the same time retain its pleasures, but we can have our choice.

That there are men who actually do extinguish pity in their own breasts, whether consciously and of malice prepense or only unintentionally, we can scarcely doubt. The officials who reign over the miserable Siberian prisoners, the usurers who prey like spiders on their victims, the seducers and panders who bring girls to ruin of body and soul, the wholesale swindlers, the torturers of brutes, the baby-farmers—these must all have killed their normal human pity as the last named of them kills the infant she suffocates or leaves to die of cold and starvation. Have these pitiless men and women proved themselves wise in their generation? Is theirs the course which one who could grasp the greater issues of human life, and who could extend his gaze over its whole horizon, would willingly adopt? Would he, for himself and his sons, and for all whom he might train and teach, desire to suppress pity, and to free himself and them forever from all the suffering entailed thereby? Nay; he who would so resolve would be not only a monster, but a fool! Well said Shelley in some of the most beautiful lines of all his beautiful poetry:

> "In sacred Athens, near the fane
> Of Wisdom, Pity's altar stood;
> Serve not the unknown God in vain
> But pay that broken shrine again,
> Love for hate and tears for blood."

FRANCES POWER COBBE.

## DOES CHINA MENACE THE WORLD?

In the October number of the Forum appeared an article entitled, "China's Menace to the World." The word "menace" strikes attention; it sounds a note of alarm and suggests preparation for defense; it means "danger ahead!" Now, there are two ways in which a nation may threaten the equilibrium of a system to which it belongs. Its martial and aggressive spirit may rouse the fears of its neighbors and warrant them in anticipating a probable attack, or, on the other hand, its peaceful progress may be such as to disturb the industrial center of gravity and to detract from the relative importance of its rivals.

That China offers a menace in the former sense, no one will venture to assert. Her traditions oppose war and favor peace. With her, industry is the road to wealth and learning is the way to honor. Defense, not conquest, is the aim of her military organization. Of late years her army and navy have both been greatly improved. A European force that should attempt to capture Peking—a thing easily effected by the Anglo-French alliance in 1860—would find its way blocked by an army of 200,000 men, more or less drilled in European discipline, and armed with all sorts of modern weapons, including Krupp cannon and quick-firing machine guns. Before he could reach the coast, on which European armaments have so often descended without opposition, the invader would have to reckon with a naval force at least as strong as that of the United States, and one which, under the training of English and German captains, has become capable of forming a respectable line of defense, notwithstanding its want of experience in actual warfare. This cordon once broken, he would encounter a chain of forts commanding every vulnerable point of the coast line, and fitted with casemates, revolving turrets, and all the most approved appliances for attack and defense. He would find the shallow waters and inlets sown with torpedoes, some exploding by percussion, others

by the electric spark discharged from a distant battery. And then, after he had run the gauntlet of fleets, forts, and torpedoes, his real difficulties would begin. While we may admit that some of this formidable show is subject to discount, the whole represents a capacity for resistance sufficient to make invasion by a European power too expensive to be thought of. If the Chinese could be convinced of this, they would at once stop work in their navy yards and arsenals; for peace at home, not acquisition abroad, is the goal at which they aim.

Seven or eight years ago, when the French chambers voted the annexation of Tonquin, without saying to its suzerain "by your leave," they were encouraged to that ill-advised measure by the famous dictum of Jules Ferry, that China was a "*quantité négligeable.*" A war followed, in which the French, after occupying several islands and threatening the mainland, were forced to retire with damaged prestige, and without retaining an inch of Chinese soil, or carrying away a farthing of the indemnity they had had the effrontery to demand. The demand for indemnity, not the annexation of Tonquin, was the spark that kindled the conflict; for, with reference to the latter, China had already declared that she would forbear to defend the interests of her vassal rather than engage in war with a friendly power. The meekness of that declaration invited aggression, but it truly expressed her settled policy. The Japanese had previously taken possession of Lew Chew, and China had contented herself with a protest. England subsequently absorbed Burmah, which China claimed as a tributary, and China ratified the act. But encroachment on her proper territory is another thing; whoever ventures on that experiment will discover to his cost how different the China of to-day is from the China of 1860.

Her "menace to the world" belongs, it would seem, to the other category. The author of the paper does ample justice to the capacity of her people to labor long and to consume little; to endure arctic cold or tropic heat; to dispute the penny loaf of the hand worker, or, by their ability in acquiring new languages and new arts, to compete with people of the West in the higher walks of commercial and manufacturing enterprise. The picture he draws might be considered altogether favorable were it

not for allusions to mendacity and to unsavory habits. Even with that "bar sinister" it cannot fail to flatter celestial pride, for does it not assure the Chinese that in peace as in war their country is no longer a *quantité négligeable?* So serious, according to Mr. Magee, is the menace in this direction, that he thinks the erection of an "anti-Chinese wall" may become necessary as a measure for self-preservation. Here, as in regard to China's military rehabilitation, we find a misapprehension as to the scope of the movement. Protection, not aggression, is the sole aim of her new arts and of her improved methods, in so far as these are introduced by the patronage of the government. The subtle manipulation of a protective tariff is something the Chinese have not yet learned; and if they had, they would not be at liberty to resort to it. Their hands are bound by treaty engagements fixing the duty on imports at a general rate of 5 per cent., with an addition of 2½ per cent., in commutation of transit dues, on goods destined to points in the far interior. At that rate, machine-made merchandise is still able to crush out the slow products of single-hand native industry. In a large portion of the empire, Chinese women are no longer able to support their families by spinning or weaving, and iron-workers are idle because the markets are supplied from Manchester and Sheffield. This state of things has led to many attempts on the part of Chinese companies to introduce machinery for the working of wool, cotton, and iron. Hitherto such efforts have been followed by failure; but the Chinese, with their proverbial patience, are sure to renew, on more than one field, the endeavor to intercept the streams of wealth which they now see pouring into the coffers of foreign merchants, and in the end they are bound to be successful.

In some lines of enterprise their competition has already been crowned with success. Forty-eight years ago England secured by treaty the right of participating in the coastwise carrying trade, which privilege was afterward extended to other nations. At that date native guilds existed which carried on a junk trade of vast extent between the North and the South. Years passed; fleets of lumbering junks lay rotting at their moorings, and their owners had sunk from affluence to penury. A steamship of any

description was a "bonanza," and every foreigner who could scrape together enough money sought to possess one, or a part of one. The Chinese were not slow to discover the source of their misfortunes; and after a few faint essays made by individuals, they began to form companies with the avowed object of ousting the foreigner and of reinstating the native in the enjoyment of his own trade. With this view the China Merchants' Steamship Company was organized, under the management of Mr. Tong Kingsing, who had been taught English by a missionary at Hong Kong, and who had been trained to commerce in a great mercantile house at Shanghai. The government favored his scheme, granted special privileges, and advanced capital from the imperial exchequer; not merely seeing in that enterprise a means for ridding its people of an incubus, but appreciating the advantage of having such a fleet at command in time of war. That fleet now numbers about forty ships, most of which are not unfit to engage in ocean traffic in any part of the world. They find, however, sufficient employment at home, and their foreign competitors in the coasting trade are few and far between.

Another movement incidental to the rise of this fleet may serve to illustrate the same tendency. Its owners discovered that they were sorely handicapped so long as they were compelled to buy coal imported from Japan, Australia, or England. They wisely resolved to seek a supply on their own soil, where coal mines were known to exist in many of the provinces, and where nothing was wanting but machinery for working them. About fifteen years ago Mr. Tong Kingsing fixed on a coal field at Kaiping, north-east of Peking, where iron also was found in convenient proximity. Before concluding his purchase he forwarded to me specimens of both minerals, with a request that I should have them analyzed by professors in the Imperial College. They were found to be of excellent quality; and the entire steam force of China is now supplied from the mines of Kaiping, the daily output amounting to not less than a thousand tons.

As the possession of steamships led to the opening of coal mines, so the working of coal has served to introduce the railway. The mines at Kaiping had to be connected with the sea by a railway eighty miles in length, and with the river port of

Tientsin by a further extension of thirty miles. So well have these roads fulfilled their purpose that they have settled forever the question of the introduction of railways, which are now pushing their way slowly but surely into the interior of the empire. The iron beds of Kaiping are not yet developed, but the same considerations that compelled the working of coal cannot fail to bring about the equipment of iron works. It would be folly to suppose that a people who refuse to import coal, will long continue to depend on England for their supply of steel rails.

From this same desire of having the sources of supply in their own country, the Chinese are prosecuting an eager search for the precious metals. Mining for silver and gold, with the aid of modern appliances, is going on at several points under the auspices of the government. Their silver they retain for home consumption, but gold already forms a considerable part of their exports. They are also prospecting for petroleum, in the hope of being able to dispense with imported oil. Its introduction has been more than once prohibited. This has been done ostensibly on the ground of its dangerous character, but in reality on account of its interference with the native trade in vegetable oils—a pretext as shrewd in its way as that of the French for excluding American pork, or that of the Germans for shutting out Russian beef.

This policy of protection to home producers has lately culminated in something which a few years ago would have been thought incredible, namely, a tacit encouragement given to the growth of the poppy, with a view to the exclusion of Indian opium. Twenty years ago the premier Wensiang appealed to England to suppress poppy culture in India, adding an intimation that if arguments should be ineffectual, China might feel compelled in self-defense to grow her own opium. This threat was disregarded as "dumb thunder," but to-day the native drug is rapidly driving the foreign article out of the market. The "Chinese Times" of June 14, in a review of last year's trade says:

"The general tendency to supplant foreign by native opium is unchecked, and from almost every part of China come evidences that it is gathering accelerated force. At several of the ports that were formerly considerable emporia for the importation of foreign opium, as, for instance,

New Chuang and Tientsin, the commissioners predict that the time is near when opium will figure in their tables as an export instead of an import."

Many influences conspire to bring about this result, one of which, undoubtedly, is a desire to retaliate for the ruin that the Indian tea trade is bringing on that of China. "Why," say the mandarins, "should we use their opium when they have ceased to take our tea?" The "cheering" leaf continues to go out and the noxious drug to come in, but both in diminishing quantities. If the process go on, we shall witness before long the consummation of a revolution unparalleled in history—two empires, after being drawn into intercourse by the desire of each for a product of the other, ending by each producing the coveted commodity and supplying its own market. Which of the parties will gain by this exchange, and which will lose by it, is too obvious to need explanation.

As to labor-saving machinery, Chinese statesmen look with no favor on its introduction, though they know it to be inevitable. They oppose the use of such machinery in the hands of foreigners, but tolerate it in the hands of natives, as a counterpoise to foreign trade. They would hail the day when, their markets being fully supplied with the products of home industry, the flags of foreign merchants should disappear from their coast. "China," say they, "is a world in herself; and if her resources should be properly husbanded and judiciously exchanged between the different sections of her vast domain, she would not need to seek in foreign lands for either merchandise or market." Such is the menace that China offers to the world; not one of military interference, or even one of aggressive commercial enterprise, but a threat of resuming her ancient isolation; because, enriched by all that foreign nations have to give her, she stands in need of them no longer. Of what use is the erection of an anti-Chinese wall in opposition to a policy like this?

Prince Kung, it is alleged, once said that China would "manufacture for the world." The idea is foreign to all the Prince's habits of thought; and the present writer can say, from long acquaintance with him, that he could not have uttered such a sentiment. Some of the "worshipful company of China merchants" may have said something about carrying the war into

the enemy's country, at the time when they were making an abortive attempt to establish a counting house in London. In fact, a proposal to expel foreigners by wresting the trade from their hands was openly made in the program of that society.

A more authentic menace is that ascribed to the late premier Wensiang, who is reported to have said that foreigners need not be so impatient to see China enter on a career of progress, for when she began to move she would go on more rapidly than they would wish; meaning nothing more than that China would one day render herself independent of foreign supplies. The old statesman's dream, I need hardly say, is not likely to be realized. For in the course of that progress which might enable a nation to stand alone, new wants are evolved, wider sympathies are engendered, and nation becomes bound to nation by complex ties; so that nothing but war can suspend their intercourse, and even that can do so for only a brief interval.

What, then, has the world to fear from the progress, slow at best, of the Chinese people? Will any one say that if nothing else is to be dreaded, there is at least some danger of being overrun by a horde of Chinese colonists and laborers? Here, too, a home-keeping policy can be shown to dominate. China, unlike Japan, has never made it a crime for her people to go abroad, but she has always discouraged them from doing so. The earliest books put into the hands of Chinese children foster their love of country by glorifying China and by depicting the barbarism of foreign nations. Who shall say that the writers of these books are more to blame than the authors of German school books, who deter their readers from emigrating to the United States by describing the dangers to which they would be exposed, and especially the liability of their crops to be destroyed by troops of voracious monkeys?* So careful of its people is the Chinese government that the coolie traffic, which at one time bid fair to replace the African slave trade, has been effectually suppressed. Informed of the sufferings of the coolies in Cuba and Peru, it not only sent commissioners to report on their condition, but entertained serious thoughts of chartering vessels to bring them home.

* "*Der Auswanderer*," Nieritz.

China has room for all her children. The writer of the "menace" is wrong in supposing that the whole empire is suffering from a plethora of population. Certain districts are overcrowded, particularly on the south-eastern seaboard; and from that quarter alone laborers come to this country. Many of the provinces are thinly peopled and call for colonists. Yunnan, with an area of 107,000 square miles, had a population of barely 7,000,000 prior to the Mohammedan rebellion, though highly favored by soil and climate. Since that devastating scourge, the figure must be reduced by half. The same is true of Kweichau, and of Shensi and Kansuh, the two provinces on the north-west. On the north-east, in what is called "Manchuria," are two new provinces, Kirin and Helungkiang, each of them nearly as large as the State of New York, which, except for a few military posts, present the spectacle of an unbroken wilderness. The government is now endeavoring to attract settlers to that region, as the best way to secure it from falling into the hands of Russia. The immense regions of Mongolia are sure, for the same reason, to be thrown open to settlement at no distant date. At present they are in a condition analogous to that of our Indian reservations, but more sparsely populated; being occupied by roving tribes of nomads, ranged under the banners of forty-eight feudal chiefs. The Chinese call Mongolia "the land of grass"; but if tillers of the soil were allowed to go there, it would yield grain for the sustenance of many times its present population.

Only in the rice lands of the South are horses and other beasts of burden not used. Even there the farmer retains one beast, which he considers an indispensable auxiliary. The buffalo plows his ground, and renders so many services that to kill it would be looked on as sacrilege. In the northern half of the empire wheat and millet take the place of rice. Fields of hundreds of acres are of frequent occurrence, and horses and mules are in as common use as in any part of the United States; while, in regions unsuited to the use of wheels, camel trains are largely employed for the transport of merchandise. The introduction of steam will supersede much of this animal force, and will make way for a growing multitude of men. When the whole of China shall become overcrowded, as it may be a century hence, the

overflow may find vent in Burmah, North Borneo, and the Straits, to which the English rulers of those countries are at present most anxious to attract a supply of Chinese labor. The French in Annam and Tonquin also are becoming convinced that without the aid of Chinese industry their new possessions can never be made profitable.

Some years ago a Chinese official named Huang Maotsai suggested that China might make herself mistress of the East Indian Archipelago merely by fostering emigration. The government gave no heed to his advice; and if it were assured that it might obtain the fairest land beyond the seas by simply sending its people to colonize it, I doubt whether it would accept the offer. The Chinese, like the French, are too much attached to their own country to seek to establish themselves in colonies abroad. When the Europeans at Canton first brought their wives to that city, the native authorities opposed the coming of the fair visitors, because they took it as a sign that the strangers from the West had come to stay. If the aim of Chinese emigrants were to make a home in foreign lands, they would contrive to take their women with them. Their only idea of home life is connected with the land of their fathers. Thither they intend to return when they shall have acquired the means of living, and thither their bones are always carried when they die beyond the seas. This peculiarity alone is enough to avert from any part of the western world the danger of being swamped by an influx of Chinese settlers.

The first Chinese arrived at San Francisco shortly after the discovery of gold, in 1849. California pioneers tell how they were feasted at a public banquet, and how the mayor, in a formal address, bid them tell their countrymen to follow. Since that date the population of the States has grown from 24,000,000 to 65,000,000; and while Europe has given the country many millions, China has contributed the paltry contingent of 60,000, which is scarcely enough to people a third-class city. In view of all these facts, where is the ground for alarm? What call is there for prohibitory legislation that tramples on the faith of treaties and wounds the dignity of a friendly power?

W. A. P. MARTIN.

## ARMOR FOR WAR SHIPS.

No subject connected with modern naval construction is less understood by the general public than that of armor. This is not surprising, because of the apparent analogy between the armored man of the middle ages and the armored ship of the present day. The conclusion is too readily drawn that light, unarmored, cobweb-ribbed, and tissue-covered craft, armed with rapid-fire guns, will supersede the armored ship as the cloth-covered soldier replaced the armor-plated one. The defense of the ship is to be the weight of its fire, as the defense of the soldier is his repeating rifle; while in rapidity of maneuver the lighter craft will far excel the "unwieldy iron-clad." The difficulty with this theory lies in the fact that it has no foundation. An average unarmored man weighs about 150 pounds, and an armored man probably weighed 250 pounds; but a ship of 10,000 tons' displacement weighs exactly the same whether it is armored or unarmored, and the unarmored ship is likely to be the more unwieldy. In building an armored sea-going man-of-war, the constructor is limited to the following approximate proportions for the different components:

| | Percentage of Total Tonnage. |
|---|---|
| Hull, | 37 |
| Engines and boilers, | 20 |
| Armor, | 20 |
| Coal, | 10 |
| Guns and ammunition, | 6 |
| Provisions and stores, | 4 |
| Spars, sails, rigging, anchors, chains, boats, spare gear, etc., | 2 |
| Officers and crew, | 1 |

If the ship is to be unarmored, the armor item disappears as such; but it reappears in an increased percentage of coal, and probably of engines and boilers. If its weight is used for coal alone, then the speed and tactical qualities will remain practically the same, and the unarmored ship will have the greater coal

endurance; but she will have no normal defensive power. If part of the armor weight is taken for increasing the engine power, then the unarmored ship will be the faster; but, in order to utilize this increased engine power to the best advantage, she will have to be made longer and narrower. Her tactical qualities, or "handiness," will therefore be inferior to those of the armor-clad, and she will still be without normal defensive power. As for the defensive power to be obtained by enormous weight and rapidity of fire, the armored ship can have that as well as the other. Any particular quality of a ship, therefore, can be accentuated only at the expense of the others, unless the result can be accomplished without increasing the weight. The vessel will profit by an improved quality of armor, of engine, or of gun; but in no case will the maneuvering or fighting qualities of a ship be improved simply by taking off the armor, as was the case with the armored man.

To commence an article on armor for ships by an argument to prove that the subject is not obsolete, may seem singular; but one has only to glance at the pages of the "Congressional Record" during any discussion of the subject of increasing the navy, to see how prevalent is the idea in the United States that the days of armor-clads are numbered. This impression exists in spite of the fact that from the day of the first iron-clad to the present, their number has increased so enormously that, according to a late German estimate, the principal naval powers will own, in 1894, the following numbers of armored ships:

| Countries. | Heavy-armored Ships. | Light-armored Ships. |
|---|---|---|
| Great Britain | 76 | 90 |
| France | 48 | 14 |
| Germany | 40 | 10 |
| Italy | 19 | 17 |
| Russia | 27 | 8 |

The lesser naval powers, including the United States, have 145 vessels built and in process of construction at the present time; so that without exaggeration we may say that in 1895, 500 armor-clads will be in existence.

As my subject is likely to be a confusing one, it will be dis-

cussed under three heads: 1, the history of armor-clads; 2, the disposition of the armor; 3, the nature of the armor.

The first iron-clads are said to have been used at the siege of Rhodes, 304 B.C., and one built at Syracuse, in Sicily, is said to have made a voyage as far as Alexandria, Egypt; but these accounts are probably mythical. To an American belongs the credit of first practically showing the value of armor for naval use. John Stevens, of Hoboken, N. J., submitted to the government, in 1812, plans for a vessel, one of whose special features was a battery protected by inclined armor. The idea was pursued by his family, and in the Spring of 1854 the keel of the Stevens battery was laid, two months before the French commenced the batteries "Devastation," "Lave," "Tonnant," and "Congreve." A few months later the English laid down the "Erebus," "Terrible" (now at Bermuda), and "Thunderer." On October 17, 1855, the French batteries, except the "Congreve," engaged the Russian forts at Kinburn, and were uninjured, though they lost 17 men from shot that came through the ports. These French vessels were of only about 1,600 tons' displacement, and the English ones were of 1,850 tons. The armor was of solid wrought iron 4½ and 4 inches thick, backed by 28 and 24 inches of oak respectively. The success of these batteries settled the question of the value of armor for naval defense, and within six years every maritime nation in Europe had iron-clads, either afloat or on the stocks. They were mostly of the same fighting type as the successful batteries, that is, broadside or box-batteried ships of a constantly increasing size; but they were not all of this description, as some attention was paid in England and Denmark to vessels of the monitor type, on the plans of Captain Coles, of the British navy. Small specimens of the type were built; but vessels of this nature did not excite a great deal of interest until, during our civil war, the success of the Ericsson monitor brought them into prominent notice. The essential feature of the Ericsson monitor was a single, armored, revolving turret, which thoroughly protected two heavy guns and their crews. This turret was mounted on a small and very low, flat hull, whose deck was moderately protected and whose sides were well protected with armor. The

vessel was designed for offensive operations in smooth, shallow water, and fulfilled admirably the vital conditions of all-round offensive and defensive power, combined with invisibility. Soon the government determined to build sea-going monitors, and much larger ones were constructed, having two and three turrets.

Defects were found both in the development of the Kinburn batteries and in that of the sea-going monitors. The broadside ship carried her battery well above water, but could not mount heavy guns or secure a sufficient all-round fire for them. The monitor was too low to use her guns in a sea-way, and could not mount small broadside guns, which are essential for protection against torpedo boats as well as for aiding the heavy guns. Eventually the two types came together in the modern battle ship, which combines turrets or barbettes for the heavy guns with a broadside battery of light guns. It has a high free-board and short military masts, but no sail power. In this process of evolution and amalgamation, during a period of 35 years, the displacement of the armored craft has risen from 1,300 tons to more than 14,000 tons, its speed has increased from 4 knots to 18 knots, the weight of the gun from 4 tons to 100 tons, that of the projectile from 68 pounds to 2,000 pounds, and the thickness of armor from 4 inches to 22 inches.

A general idea of the distribution of armor can best be given by tracing briefly the conditions that constructors have wished to meet, according to the development of gun fire; always bearing in mind that the weight must be approximately 20 per cent. of the displacement. We may go a few per cent. higher, perhaps 30 per cent., but always to the disadvantage of some other essential feature. In the construction of the first large vessels after the Crimean batteries, the French led the way in 1858 with the "Gloire," a wooden ship of 5,600 tons, and with three others of the same type. Naturally the first idea was to protect the entire water line and the ship's side above it, and this was sufficiently accomplished against 68-pounders, which were the type guns of the day, by solid wrought-iron plates 4.7 inches thick. The English speedily followed, but, more wisely, they constructed the hulls of iron, and although their early ships are antiquated, they are still efficient. The advent of the rifled gun

changed the conditions of the problem, and the armor soon had to be thickened. In consequence, the idea of protecting the whole of the ship's side was abandoned and the armor was concentrated over a part.

For fifteen years all authorities conceded that the first essential was a belt of heavy armor at the water line, the remainder of the available weight being distributed in protecting the engines and the guns; but in 1873 the Italians made a new departure in the "Duilio." They abandoned the belt, introduced a curved protective deck below the water line, and concentrated all their armor on a citadel rising from it in the middle of the ship and inclosing the engines and boilers. On the top of the citadel were two turrets, each containing two 100-ton guns. The idea of this construction was that if water should come in through shot holes at or below the water line, it would do no harm, as it could not go below the protective deck, and the stability of the ship would not be endangered; while, at the same time, the armor of the citadel could be made 22 inches thick. The citadel has since been adopted more or less in England, Italy, and Russia; but never in France, which has always adhered to the belt. The curved protective deck, however, is now adopted in all men-of-war, whether armored or unarmored. All projectiles from horizontal fire are expected to glance from it; and in order that it may turn them more effectively, it is gradually being thickened at the curved sides. In some of the so-called unarmored ships, like the English "Blake," of 9,000 tons, it has now reached 6 inches in thickness, and soon it will need to be thickened in the crown to meet the curved fire from pneumatic and other mortars. The unarmored ship is rapidly becoming an armored one, with the armor on the inside instead of on the outside. Finally, in 1888, after the advent of high explosives in shells, France returned to a complete outside coating of 4-inch armor in one of her newest ships, the "Dupuy de Lôme," of 6,300 tons. This thickness is almost exactly the same as that of the armor of the "Gloire," which was built in 1858 by Dupuy de Lôme himself. Four inches of steel has been found ample to keep out melinite shells and projectiles from rapid-fire guns, and the argument now is that one must protect the men even at the expense of exposing the

vitals of the ship to large penetrating projectiles. The danger from sinking, in this and many other French ships, is avoided by filling the sides at the water line with cocoa cellulose, a substance which weighs only one eighth as much as sea water, and which can be made either to stop a shot hole by swelling when wet, or to obstruct the water if put up in water-proof cases.

The results of experiments in the United States and of Europe from 1841 to 1843, showed that six one-inch plates of good wrought iron could be penetrated by a 68-pound round shot, but that a solid 4-inch plate could not be so penetrated. It was also found that two feet of oak backing was equal in value to about one inch of plate, and that this was necessary to make the armor efficient. Compared with what we obtain to-day in the way of penetration, these results are modest; but the experiments demonstrated two important facts—that solid armor is 33 per cent. better than laminated, and that some kind of a cushion is needed between the side of the ship and the armor. These experiments determined the armor of the vessels laid down in 1855 and 1858, and caused the French to build the "Gloire" class of wood, thus making the planking and framing of the hull serve as a backing; whereas in the English iron ships the cushion planks were dead weight. Succeeding vessels had thicker armor; but in the course of time constructors found that the thickness could not be carried, in solid wrought iron, beyond 12 inches with guaranteed regularity. All kinds of experiments were made; but if the iron was harder, it became more brittle and broke up badly under fire. Cast iron and cast steel were used without avail, and various kinds of springs, including rubber and matted wire, were tried as backing. At last, resort was had to the "sandwich" system, as in the "Inflexible," whose side is composed of a 12-inch plate, then 12 inches of teak, then another 12-inch plate, then 6 inches more of teak strengthened by angle-iron girders, and lastly an inner skin of two one-inch plates. Several ships were constructed on this plan; but in 1876 the success at Spezzia, in Italy, of a French solid-forged steel plate 22 inches thick, made by Schneider and Company of Le Creusot, over both solid wrought-iron and sandwich wrought-iron targets, caused the ultimate abandonment of wrought iron.

For the moment, solid steel armor seemed about to succeed wrought-iron armor, exactly as steel has superseded iron for industrial purposes. Like most radical departures in metallurgy, however, the development proved exceedingly difficult, and meantime a formidable rival appeared in compound armor composed of a wrought-iron plate with a hard steel face one third as thick welded to it. Like most compromises, this armor was capable of a more rapid development than either of its components. It relies for its resistance on the hardness of its face and on the excellence of the weld, as the wrought-iron back affords but little additional strength. The solid steel plate has less surface hardness, but it supplies a uniform resistance throughout its entire thickness. The method of bolting is necessarily different in the two cases. The compound plate requires a small number of large bolts, which sink deep into the soft back in order to obtain a secure hold; the steel plate admits of a larger number of smaller bolts lightly sunk into its more tenacious back. Compound armor was first successfully experimented with in England in 1877. Its principal makers are Cammel and Company and Brown and Company, in England. The chief makers of solid steel armor are Schneider and Company, in France.

In 1880 the French government instituted a series of competitive tests at Gavre, with plates from 16 to 22 inches thick. Cammel was the victor, and three prominent French firms were induced by the government to acquire the Cammel process. The report of the trial committee, however, laid great stress upon the possibilities of steel. Schneider and Company changed their method of manufacture, and in 1882 won in a public trial at Spezzia with plates 19 inches thick. A second trial took place in Russia, at Ochta, with plates 12 inches thick, and Cammel was the victor. The third trial was at Amager, in Denmark, with plates 9 inches thick, and Cammel was again the victor. At the fourth, at Spezzia, in 1884, with plates 19 inches thick, Schneider won; and the fifth, at Annapolis, Maryland, in September last, with plates 10½ inches thick, was so overwhelmingly in favor of Schneider that the day of compound armor now seems to be past. The result of this last test should be startling in England, as that nation uses nothing but compound armor.

Steel armor is now manufactured on the Schneider system at Terni, in Italy, and will soon be made in the United States at Bethlehem, Pa. In the French navy, curved plates about the bow and stern of a ship are made of wrought iron or steel, whether the remainder be compound or not. This is because compound plates cannot be bent without weakening them. The English navy several years ago gave up carrying the armor belt forward and aft.

Since the perforation of any plate, however thick, is within our power, with forged chrome-steel projectiles, and since we can figure its amount by a formula almost without firing a shot, it becomes a matter of personal opinion, in making a comparative test, whether we shall use a small projectile with a high velocity or a large projectile with a low velocity. With equal power to perforate the plate, the smashing effect of the latter will be the greater; but which would be the more likely to hit in battle is impossible to tell. The complexity thus introduced has caused great difficulty also in estimating what should be the proper reception tests for a lot of plates intended for the side or the turret of a vessel. The object in France is to test uniformity of manufacture, and not absolute degree of penetrability. Plates of all thicknesses, and of any taper or curvature, are fired at with a gun of a caliber about equal to the thickness of the plate, and the projectiles are of chilled cast iron of known uniform quality. Three shots are fired having an energy just sufficient to perforate a wrought-iron plate of the same thickness, and the backing. The points of impact are $2\frac{1}{2}$ calibers apart. None of the projectiles are to go through the plate, and the degree of excellence is graded according to the number and size of the cracks. This test is obligatory, and is very rigid—not so much from the severity of the initial shock as from the size of the projectile, the number of the shots, and their close proximity. Other continental nations have substantially the same test. In England, the test for thin plates is a single cast-iron or cast-steel shot of 20 per cent. greater energy than is necessary to perforate a wrought-iron plate of the same thickness; but the test is optional on the part of the government officers. The test for thick plates, of which England uses more than any other nation, is to

cut off a piece and roll it down to a thickness of 10½ inches. The piece is then cut to a standard size of 8 by 6 feet, and fired at with a 6-inch gun producing a velocity of 1,976 feet per second, and developing an energy 7 per cent. greater than would be necessary to perforate a wrought-iron plate of the same thickness. Four projectiles are used, two of forged steel and two of cast iron, and the shortest distance between any two points of impact is four calibers. No rules are prescribed to govern the firing committee as to what this plate must stand, but a fifth shot is sometimes fired at the center of the plate after it has been accepted. Of course a small plate thus rolled down is much better than the large plate from which it was cut. This English reception test furnished the basis of our Annapolis comparative test; the conditions being the same, except that in the latter all the projectiles were of forged steel and the velocity was 2,075 feet per second, developing an energy 17 per cent. greater than that necessary to perforate wrought iron. The compound plate was demolished, while the steel plate was penetrated only by the points of the projectiles, and at this stage was not cracked. Our proposed reception test is based upon the French; but it is more severe, as indeformable steel projectiles are to be used. Such projectiles are not used in reception tests abroad, because uniformity in their manufacture cannot be relied on, and an element of uncertainty is thus introduced.

The earlier projectiles used against armor were simple cast iron, and these were followed by chilled cast iron. Wrought iron, cast steel, and forged steel were used also, but have never been as satisfactory as the chilled cast iron. Finally, the discovery was made that, by the addition of chromium to the steel and by peculiar treatment, a forged projectile could be produced so hard and tough as to resist all attempts at deformation. When well made, these projectiles will penetrate either wrought-iron, steel, or compound armor. Holtzer and Firminy, in France, are the most successful producers of these projectiles.

Various attempts have been made to improve the characteristics of steel plates, by tempering with lead, with ice and salt, and with numerous mixtures of the witch's caldron order, with more or less temporary success. For large thick plates, how-

ever, uniformity of production is as yet obtained only by tempering in oil. The ice-and-salt method is very efficient up to a thickness of 2 or 3 inches, and produces excessively hard and tough plates for shields against rapid-fire guns. At present the tendency is to try alloys of manganese, chromium, tungsten, copper, nickel, etc., with the steel. The nickel alloy has given the best results, and has raised the standard of homogeneous armor permanently above that of simple steel. With less than 5 per cent. of nickel, it possesses greater tenacity, can be made harder, and does not crack. A plate made by Schneider and Company, tested at Annapolis with the simple steel and compound plates, gave extraordinary results. After four 6-inch projectiles had been fired at it, its general appearance was much the same as that of the steel plate. There were no cracks in either, and about the same penetration in both; but the tenacity of the nickel steel was such that the holes were plugged water-tight by the bodies or heads of the projectiles themselves, whereas three of them had rebounded from the plain steel after piercing it. A fifth shot fired at the center from an 8-inch gun touched the backing behind both plates. The plain steel was cracked, but the nickel steel remained uncracked and was ready to receive another shot. This was a tremendous test, standing to that with the 6-inch shot in the relation of 5,000 foot-tons to 3,000 foot-tons. Nickel-steel plates will probably be made hard enough to break any projectiles that are manufactured at present.

With reference to the efficiency of armor when applied to the side of a ship, as compared with the results on the proving ground, the reader must bear in mind that at sea the presentation of the armor to the projectile is always angular. Prominent artillerists estimate that armor doubles its value when it goes to sea. The efficiency of flat-headed projectiles requires further investigation and development for this reason.

F. M. BARBER.

## NOTES ON GHOSTS.

"KILLING a ghost would bring him to life again," says the specter of the Danish monarch, in Lord Iddesleigh's play of "Hamlet, without the Prince of Denmark." Perhaps the reason why ghosts are still so lively is that they have been so often killed by the arguments of sense and of science. In conversation they furnish an endless topic, and even in magazines and newspapers the ancient discussion is continually revived. Indeed, there are good reasons why we should cling, just now, to our fancies and to our half-beliefs. Science is exhausting the universe, as explorers are measuring out the visible earth. Central Africa has now scarce an unvisited region; we know that little room is left for all the white civilized peoples, and giants, and fabled beasts of tradition. The universe is too well understood and too familiar; but we still long for a margin undiscovered, where hope and romance may dwell, and we find it in the world of spirits. An untraveled land is our desire, a misty domain where fancy may find a rest and hope may fold her wings; and that untraveled land is the country of ghosts. Thus we are skeptical and superstitious, still untaught to resign all credence of apparitions which are not mere delusions or hallucinations. Hence comes the activity of the Psychical Society, and for this reason people seek after professional mediums, tables that rap or skip, and trances of lucid vision, paid for at so many dollars a trance. The common explanations that the belief in ghosts originated in dreams and in the confusions of the savage intellect in its early reasonings, fail to satisfy every one, though they may suffice for Mr. Tylor and for Mr. Herbert Spencer. If we follow these philosophers, the belief in the apparitions of the dead is among the origins of religions.

Probably as long as mankind endures, belief of some sort will never fail for want of this perennial well-head, this source of a faith that we are environed by mystery and are creatures of

it; always ignorant of our whole nature, and of many things that we would give the rest of knowledge to know. Ghosts are not, indeed, substantial enough to build a creed upon, or to buttress a belief with; as Henry More and Glanvill and Sinclair tried to show in the seventeenth century. They are strong enough, however, to carry light hopes and fluttering terrors, and to inspire at least "the fears of the brave and the follies of the wise." Till men universally shake off a hankering kind of interest in these appearances, a door is ever open into the unknown; and in the unknown there is space enough for all the empire of imagination. Even physical science, as certain modern examples prove, cannot wholly protect a man against those unofficial opinions. We are born to be either complete skeptics; or half-hearted believers, in the manner of Sir Walter Scott and Dr. Johnson; or convinced swallowers of every kind of spiritualistic mystery or mummery; or, lastly, we may have the prudence to wait and doubt, being agnostics in the matter of ghosts, as others are in the matter of God.

To be frank and make open confession, I admit that, after much study of ghosts, I find myself in Sir Walter Scott's position, as described by Lockhart:

> "There is, perhaps, in most minds, a point, more or less advanced, at which incredulity on those subjects may be found to waver. Sir Walter, as it seemed to me, never cared to ascertain very precisely where this point lay in his own mental constitution; still less, I suppose, did he wish the investigation to be pursued by others."

One of his ghost stories would receive from him a "natural solution"; another tale would be smiled at as "merely fantastical"; a third would "take its chance of a serious reception." Thus, in his own case, there was the apparition of a man that he met as he rode across the moor to Ashiesteil. The tale is in Gillies's "Recollections of Sir Walter Scott," published before Lockhart's biography. Scott seems, after riding back and getting a second view of the specter, to have left it unexplained; and he treated in the same way the nocturnal disturbances at Abbotsford, on the night when his architect, Mr. Bullock, died in London.* On the other hand, Scott explained his vision of Lord

* Lockhart's "Life of Scott," v., 309.

Byron, in the hall at Abbotsford, as a mere optical delusion.* In Italy he told Sir William Gell "how to make a ghost," and I hope no young person will try the experiment. You paint your ghost white, on tin, exhibit it in the dusk, and make it vanish "by turning the edge, almost without thickness, to the spectator." Thus there are ghosts and ghosts. In a note to the new edition of Sir Walter's diaries, which will be published before this essay, there is a very touching story of Sir Walter's own apparition. His friend, Mr. Skene, of Ruberslaw, was still alive in 1864. One day his daughter found him with a look of much happiness on his face. He said that Scott had been with him, talking of old times; "he had come a long way." In a few days Mr. Skene died, and one trusts that this ancient friendship found its crown.

There are ghosts and ghosts; for one, I cannot purge my own mind of that forlorn faith, though I am particularly skeptical about ghosts that I may see myself, or may hear of at a dinner party. There are points, too, in ghost lore which seem to be more or less neglected by the students of this queer psychical science. Elsewhere, perhaps, I have tried to show that the historical and traditional aspect of ghosts is neglected—the point where they touch on anthropology and folk lore. Mr. Tylor has examined, with his usual learning and lucidity, in "Primitive Culture," what he regards as the predisposing causes of belief in the supernatural—the reasonings of the early mind on the obscure facts of sleep, waking, death, trance, and dreams; the hallucinations of fasts and of narcotics. But no one, to my knowledge, has studied and compared the ghost stories of savages and of the ancient peoples, or has properly examined oriental magic, with its extraordinary performances.

Concerning this last matter, the late Colonel Henry Yule, the editor of Marco Polo, had begun collections out of his unrivaled knowledge, but his lamented death has left them incomplete. Among his anecdotes was one about the rope trick—the one in which the magician throws a rope into the air, where it hangs self-suspended. Another magician climbs the rope, and a third follows him with a knife. They disappear; presently the mangled

* "Letters on Demonology and Witchcraft," pp. 38, 39.

remains of the first climber are thrown down, the second descends, and the fragments of the first are put together and reanimated! Of these prodigious events an oriental traveler in the thirteenth century was a witness. He also saw the cups at the table of the King of Delhi carried by invisible hands, as he supposed. But he adds two curious notes to his narrative; first, that he was seriously unwell after beholding both performances; secondly, that a friend who was with him on the first occasion laughed, and said that nothing had happened at all! Now, the tale of the former feat is current in many ages, and something very like the second, with the other phenomena of the *Poltergeist*, is reported by an early Spanish missionary at the court of a converted Peruvian prince. We may compare with these the oriental arts by which a man is made to sit raised two feet in the air, or is laid at rest, horizontally, with no support but the point of a sword under his elbow. The former trick is described in an old number of the "Asiatic Review"; the latter was reported to me by an English officer, an eye-witness, who closely examined the suspended person. Can we suppose, as the old traveler's tale might suggest, that some hypnotic influence was exercised, and that the looker-on saw what he fancied he saw by dint of hypnotic "suggestion"? Or what are we to say about the most widely-diffused kind of story—that of "supernatural" disturbances, as in the case of the Wesleys' house, or of the Peruvian prince already spoken of; or about those extraordinary anecdotes of disintegrated matter in a recent little book on "Obeah," in Hayti? Very frequently vulgar imposture is at work; but, in the Wesleys' house, or in the old Scotch affair of the Devil of Glenluce,* the long-continued disturbances were never explained, any more than the analogous events at Abbotsford.† "The noise," says Scott, "resembled half a dozen men hard at work putting up boards and furniture; and nothing can be more certain than that there was nobody on the premises at the time." The business "made a much stronger impression on Scott's mind," says Lockhart, "than might be gathered from the tone of" his letter to Terry on the subject. This is the most vulgar

* "Satan's Invisible World Displayed."

† Lockhart's "Life of Scott," v., 309–315.

kind of "manifestation"; but what interests one is the wide diffusion of this belief, and of the belief in the felling of trees by a mysterious "nocturnal axe." This occurs in Ceylon; this sound frightened De Quincey's brother, Pink, on the Galapagos Islands; and this, according to the early Spanish missionary, Sahagun, was heard by trembling Aztecs in the woods of Mexico. But psychical research seems rather to neglect the noisy *Poltergeist* in literature, while when investigators occupy haunted houses the ghost usually declines to perform, resenting, as impertinent, a scientific curiosity. To an open mind, it seems that in Peru, Hayti, Mexico, Glenluce, or modern Europe, something odd and unaccounted for actually did occur, or else that mankind almost everywhere is subject to identical hallucinations. If we accept the latter hypothesis, it is at least a curious and interesting fact in human nature; while the former theory, if any one credits it, leaves us with some wide unexplored region in our environment. And that would be pleasant, when all our environment has been so minutely explored and mapped out. It would please us much could we find warrant for the tradition of a surviving civilized state behind Roraima, or for that of a Greek republic continuing in Kafiristan. In the same way one is disinclined to abandon a suspicion of a region peopled by bogies, though they are bogies rather capricious and malign than quaint and beautiful, as in the fairy world. Dr. Maudsley may scout these inklings as a superstition almost insane, but we are not for carrying them to the verge of mental disease.

The same reasoning, if it can be called reasoning, applies to the stories of *séances;* to the cold wind that blows before the coming of the bodiless; to the mystic lights which the Eskimos knew as well as the Greeks; to the fire not of this world that illumined the midnight hall of Odysseus, and the chamber of the infant Heracles, and Gunnar's grave in the Saga, and the chamber of the haunted girl in Henry More, and the chapel of Roslin, where

> "Blazed battlement and pinnet high,
> Blazed every rose-carved buttress fair;
> So still they blaze when fate is nigh
> The lordly line of high St. Clair."

The unanimity of tradition, among races widely remote from

each other, interests one; and so does the coincidence of the tradition with what we are told by modern seers, who certainly do not know much about Henry More, or Homer, or the Sagas, or the Eskimos. The tales of the old Jesuit missionaries, in their "*Relations*," of Huron and Iroquois magic and spiritualism, and the analogous anecdotes of second sight which missionaries like the late Mr. Leslie bring from among Zulus and Basutos, may be looked into by any one who likes to let his fancy roam after the shadowy kindreds of the dark. What was that wind which, on an occasion not lightly to be quoted, shook the Huron "medicine tents"? We may say that all mankind is in the same lying story, or under the same sort of hallucination—and even that would be a fact worth notice—or, like Scott, we "may not care to ascertain very precisely where the point lies in our minds at which incredulity begins to waver." To adopt this last policy seems to me, in a certain slight degree, to make life and the world a trifle more mysterious and entertaining. If I am superstitious, it is with my eyes open, and because I like it. But this edifice of half-belief or quarter-belief rests on general tradition, of course, and not merely on the statements of professional "mediums," who, in the long run, seem never to escape being found out for quacks, with all their machinery. They concern us only because, consciously or unconsciously, they reproduce some of the ancient effects that have entertained and puzzled most races; that have now been hailed as miraculous and sacred, now regarded as proofs of witchcraft or of necromancy. The consensus of testimony is what interests us, for indeed the evidence in any particular case is commonly of the feeblest.

As to ghosts, we find the same uniformity, or great similarity, of belief. One of the dialogues of Lucian, the "*Philopseudes*," reads like a modern conversation of the credulous. In Syria, or Rome, or Athens, as in London, or New York, or Fiji, ghosts have always been the same vague, ineffectual, capricious beings. A ghost with a purpose, and with a rational idea of attaining it, has always been very rare. He seems hampered by impediments of which we know nothing; he moves like a delirious patient walking in a fevered sleep; he never can come to

the point, and appear at the right moment to the right person. Ghosts behave so now, and so they behaved to the friends whose tales Lucian laughed at. If there are no such things as ghosts at all, why does all tradition assign to them this common character? In certain cases a ghost story is clearly a myth, invented once for some purpose, nobody knows when or where, and handed down through the ages with changed names and changed localities. Few specters are better known than that Irish one which supplied the foundation of Scott's ballad, "The Eve of St. John." The ghost of her lover appears to the lady; she asks of his fortunes in the next world; and, as the poet finely says,

"The vision shook his head."

As a sign of his unhappy destiny,

"He laid his left hand on an oaken stand,
His right upon her arm;
The lady shrunk and fainting sunk,
For the touch was fiery warm."

Perhaps "warm" is too mild a word, for

"The sable score of fingers four
Remains on that board impressed,
And for evermore that lady wore
A covering on her wrist."

A noble Irish family declares that this kind of sign was given in the last century to a lady of the house, and this legend was the basis of Scott's poem. But the incident of this particular token from the dead to the living—the burning of the hand or wrist—may be traced back through mediæval sermons to the history of William of Malmesbury, shortly after the Norman conquest. In his version, both the ghost and the person who was branded by the ghost are men, but the main facts remain unaltered. Now, one would not maintain that this coincidence proves all ghosts to have the same unpleasant way of clinching their argument for a future state of purgatory; but, on the other hand, we may suppose that all the stories of this cycle are myths, derived from some lost origin, and retold, with new names and details, in successive ages.

The problem becomes more puzzling when, in lands savage or civilized, people see the specters of their dead kinsfolk, who

predict to them their own dying days, the prophecies fulfilling themselves. This is illustrated by Henry More's tale of the lady who saw her dead mother, was informed that she was to expire at noon the next day, and did so, punctually, among her sorrowing kinsfolk. Now, this kind of ghost and ghostly warning is very common among the natives of Fiji and of Australia, as Mr. Fison and Mr. Charles du Vé allege. In "The Cruise of the 'Beagle,'" I think, we hear how Billy Button, a Fuegian boy on board the "Beagle," saw his father's ghost one night at sea, and how, when they reached Terra del Fuego, they learned that the old gentleman had died at or about the time when his son beheld his apparition. This shows that the most orthodox and official European ghost may appear to a savage. But, to be fair, one should need to ask whether Billy Button was in the habit of seeing wraiths, or whether this was a solitary example. In all the modern psychical books we find countless examples of the specter seen at the moment of his owner's death. But the Psychical Society is now collecting *instantiæ contradictoriæ*—cases where a specter of the living is seen without apparent rhyme or reason, when no death coincides, and when nobody can explain the appearance as anything but an hallucination.

People are often advised, if they see an apparition on a chair, to sit down on it; but suppose it turns out to be no ghost, no illusion, but a man of flesh and blood! He would not readily be persuaded by a lady who tried the experiment that her motive was not affectionate, or by a man that it was not insulting. What are people who see wraiths to do? For myself, I have beheld only a brace of apparitions. The first was the wraith of a scholar, at that moment either dead or dying, far from Oriel Lane in Oxford, where I encountered his appearance. The second, fortunately, appeared without any such cause, and for no motive whatever. If the first was a ghost, what was the second? And if the second was an hallucination, can one call the first anything more significant? Lucretius thought that all bodies throw off airy semblances of themselves, which, being beheld, are taken for visible spirits. But he formulated no law of their appearance, nor did he tell us why some persons see them while others do not.

Not long ago, in rather curious circumstances, one person saw what he took for a man, though no man was there present. Twenty minutes afterward, another person saw the same figure, in the same place, though it was now invisible both to its original observer and to a third person, who had joined the other two. All three were in perfect health, and thinking of anything but apparitions. Clearly, "there are visions about"; so many, indeed, that one can hardly rate human testimony very high. Conceive such a case as this: A gentleman, a bibliomaniac, sees a rare book in a public library, and expresses his admiration. A day or two later, two of his acquaintances see him examining the book while it is being shown to them. The book disappears. Now, the gentleman, happily, can prove an alibi. He was elsewhere, and can demonstrate the fact. But his wraith, his *Doppelgänger*, his double, was haunting the library, and thus, among people who do not believe in doubles, suspicion is brought on a perfectly blameless character. I do not say that this incident ever occurred; but, with wraiths and hallucinations going about, it readily might occur, and would be highly inconvenient. Few persons, indeed, would credit a man if he should maintain in court that he had not been present on the scene of some crime, but should admit that his "astral body," for all he knew, might have been there. Many a man may have been hanged in the ordinary body, for some vagary of his wraith or astral body. In this conceit I perceive great possibilities for short stories and for fiction generally. Writers for magazines will please take notice that the idea has been copyrighted in England; I fear I cannot protect it in America.

Of one point in the common argument against ghosts, the futility seems to me manifest. Ghosts do not come of "attentive expectation"; at least, not to everybody. I have been at amateur *séances*, and expected a great deal; but never saw or heard anything more abnormal than a suppressed giggle, for which my own innocence was unfeelingly blamed. I have passed nights in a haunted castle, with the whole haunted wing to myself; and that when I was young, ill, and overworked. I have occupied the ghostly chamber where the original of Dickens's Miss Havisham (in "Great Expectations") lived and died in her

moldy bridal raiment. But, in spite of expecting, with fear and trembling, all sorts of horrors, I never saw or heard anything to establish the existence of a bogey. In another haunted castle, and in the haunted room, I have known a timid and invalid spinster to sleep comfortably, though a military officer of approved valor had previously been so frightened in it that he had cut short his visit and fled the place. Here was a ghost of gentlemanly character, who appeared only to persons unlikely, as he might guess, to be dangerously alarmed. As a rule, the fairly-well-attested ghosts of my acquaintance have been seen, not by the timorous and fanciful, but by unimaginative people in perfect health. Some persons, as a man says in one of George Eliot's novels, "have the smell for a ghost"; others have it not; and you cannot say beforehand who will prove a seer, and who will be unvisited by any shape of dread.

A scholar of world-wide reputation (among scholars) was, when a boy, driving in a dog-cart, while a stout farmer held the reins. Both were Scotch. They passed a churchyard, beyond which the road ran through a long avenue of trees. Out of the kirkyard slipped a shadowy figure, passed over the wall, glided beside the dog-cart all down the long shadowy avenue, and then vanished. Neither the man nor the boy said a word while this lasted. When the appearance had vanished, the farmer whispered, "Did you see yon?" "Ay!" said the lad. "Thank the Lord!" cried the farmer; "I was feared it was the horrors." He had been afraid that the appearance was subjective, and born of whisky toddy. Finding that it was objective, he was reassured, though neither he nor his companion ever knew what the thing was that they had looked on. They both, perhaps, were "seers," and "had the smell for a ghost."

To myself, the most impressive specter I ever heard of, at next to first hand, was this—I think I may have told the tale before: There is, in an English county, a village of one long street. The houses are small and old. At the head of the street, and at right angles to it, is the manor house among its trees. The lady of the place was driving through the village one day (she told me the tale), when, through the open door of one of the houses, five or six children rushed in the utmost panic, and one

of them fell down in a fit before the horses. This was about three o'clock in the afternoon, on a sunny August day. The lady stopped, attended to the child, and asked the others what ailed them. They said they had been at play on the staircase, when they were terrified by "a dreadful woman," who suddenly appeared among them. And why was the woman dreadful? The children could say only that she was dressed in a long woolen robe, and had her brow and chin bound up with white linen. In fact, she was a walking corpse, come back from the days when the law compelled us to be buried in woolen, for the better encouragement of the wool trade. This wandering old death, seen in the sunlight by children, has always appealed to me as a very good example of ghosts and of their vague, unaccountable ways. For it is most unlikely that the children knew anything of the obsolete law or of the ancient English mortuary fashions. However, there are differences of taste in ghost stories, and many prefer something with more of a motive for an appearance. But the best-attested specters are motiveless; they resemble, as Mr. Myers says, what we might expect of a dead man's fevered dream, if in that sleep of death such dreams may come. Whether they come to the dead or not, a sort of refraction of them has come, and probably will always come, to the living, now and then, and like

> "A sunset touch,
> A chorus ending of Euripides,"

will ever make us less assured that we know all about ourselves and have spoken the final word on death and life. This, I think, is the moral and the lesson of ghost stories—we do not yet know everything.

A. LANG.

## SPEED IN RAILWAY TRAVEL.

"And what if Trade sow cities
Like shells along the shore,
And thatch with towns the prairie broad,
With railways ironed o'er?
They are but sailing foam-bells,
Along Thought's causing stream,
And take their shape and sun-color
From him who sends the dream."

THIS and another thought of the modern Plato, in some sense contradictory of this extract from "The World-Soul,"* have always been favorite texts with me. Says Emerson in "Fate":†

"Steam was, till the other day, the devil which we dreaded. . . . But the Marquis of Worcester, Watt, and Fulton bethought themselves that what was power was not of the devil, but was God; that it must be availed of, and not by any means let off and wasted. Could he lift off pots and roofs and houses so handily? He was the workman they were in search of. He could be used to lift away, chain, and compel other devils, far more reluctant and dangerous; namely, cubic miles of earth, mountains, weight of resistance of water, machinery, and the labors of all the men of the world; and in time he shall lengthen and shorten space."

And what wonders has this marvelous thought of Watt, and of his contemporaries, his predecessors, and his successors accomplished since the birth of the philosopher of Concord, nearly ninety years ago! My father was born with the century; began his life's work as a colleague of Watt in that grand task of reducing the mist giant to useful and obedient labor, while Watt still lived; was contemporary with Fulton and Stevens, with Fitch and Evans, with Bell and Symmington, with Sickels and Corliss; saw George and Robert Stephenson enter upon their wonderful task; witnessed the formation of those systems of intercommunication which were organized to display the ingenuity of Morse and of Wheatstone and to yield them honor; and saw

* "Selected Poems," Riverside Ed., p. 26.
† "The Conduct of Life," vol. 3, p. 32.

the most marvelous transformation in the history of civilization, the conversion of the barbarism of the eighteenth century into the enlightenment of the nineteenth. This transformation period, the grandest of history, exhibiting the most extraordinary applications of the mechanic's talent and the most wonderful material growth, is comprised within the space of a single lifetime, after thousands of years of scarcely perceptible advance; all as the result of "Thought's causing" impulse, just awakened to its purpose. But yet neither the great philosopher nor the noblest of mechanics lived to see the "flying train" crossing the country at the rate of a thousand miles in a day, making its 50 miles, sometimes 80 miles, in a single hour, and transporting its precious freight so smoothly and so quietly that no one among the crowd of travelers realizes the speed or feels apprehension.

The interesting questions of the hour in this connection are: How is such speed attained? What are the secrets of the success that was so long deferred after all the means had been placed at the disposal of the engineer? What have been the obstacles; what the means of overcoming them? What are the prerequisites to still further advance? What are likely to be the limits and what the limiting conditions in this wonderful race? Must we finally resort to some other means of transport, if we should desire to attain the speed of the fastest birds? What are the uses and what the necessities of such marvelous velocities of transportation across the continent? Some of these questions are readily answered; others can be given only provisional replies, or, for the time, speculative ones. The engineer can readily compute numerical solutions for parts of the aggregate problem; he can give but approximate statements for others; he must resort to little better than guesses in endeavoring to answer the rest. His wonder at the results of earlier inventive genius and constructive talent is hardly less than that of the layman. His interest in the future is probably greater; but his knowledge of what the future will bring with it is little more, though his guesses may be shrewder. But "shrewdness is to the man of activity what scholarship is to the man of thought," the latter being the knowledge of books, the former "the knowledge of the ways of men"; and as the modern engineer is the man of

books and the man of action combined, we may well ask what his combined scholarship and shrewdness have done in this direction, and what they promise, however vaguely, to do.

However familiar one may be with the science and the art, with the theory and the practice, of engineering; however well he may understand the construction and operation of the locomotive and of the railway, he can hardly stand unmoved beside the track and watch the approach of a swift train on one of the transcontinental lines. It grows, in a moment almost, from a black, silent speck in the far distance, to a rushing, roaring monster, tearing past with the speed of a whirlwind, carrying with it a cloud of dust, despite the cleanliness of the "ballast" and of the roadway; while the trees bow from the sides of the track toward this irresistible modern giant, which, in another instant, diminishes to a black point again, in the opposite far distance, sweeping on with the force of a thousand horses. However frequently he may have seen this latest miracle of engineering, he cannot witness the sight without wonder, or even without awe.

The fastest existing "trotter," evolved by scientific processes from the older stock, can hardly attain a speed of 30 miles an hour. "Flying Childers," the swiftest running horse that ever emulated the fabulous griffin, never, even by report, exceeded 32 miles an hour. The flight of the common field birds averages probably about 25 miles an hour, and the velocity of the larger and faster migrating birds, when they are traversing long routes, is probably not often more than 50 or 60 miles, though it is sometimes reported to be much higher.*

The speed of the flying train far exceeds that of the fastest horse, and rivals that of the swiftest birds. The power of its engine is rated by the engineer at not far from that of a thousand horses; while it possesses between 1,200 and 1,500 actual horse power, as measured by the known strength of the ordinary working animal in our streets. Moreover, it can exert its enormous strength continuously, hour after hour, without respite; while the animals must be worked in relays, resting at least two thirds of their time. It would thus evidently be necessary to keep up a stable of from 3,000 to 5,000 horses for every such

* See "The Problem of Air Navigation," FORUM for January, 1890.

engine, to insure equally continuous service. Were these horses capable of making the speed at all, a "string team" six miles long would be required to haul the train.

The swift train illustrates one of the latest and highest attainments of the constructing engineer, of the inventor, and of the skilled mechanic; while the decorator finds employment for his greatest skill in the adornment of this peripatetic palace. Such a train costs the railroad from $150,000 to $200,000 for construction. It includes bath rooms, sleeping rooms, restaurants, and reception rooms; and supplies ladies' maids, stenographers, typewriting amanuenses, and barbers. It makes 40 miles an hour between stations, frequently running hour after hour without a stop; it takes up its water as it flies, from a tank laid between the tracks, and traverses half the continent in its course.

We have seen what is meant by the power applied; let us consider what this speed means. Forty miles an hour is two thirds of a mile, or 3,520 feet, in a minute, and nearly 60 feet in a second. This speed is about that which would be attained by a body falling freely from the top of a tower 60 feet high, or from the roof of a five-story house. The abrupt stopping of such a train, could it be instantly stopped at all, would have precisely the effect of such a fall to the ground. The fearful consequences of a collision, or of a broken axle, are thus sufficiently accounted for. The meeting of two such trains would have results equivalent to those of a fall of nearly 230 feet—about the height of the Bunker Hill monument. The danger and the damage are proportional to the square of the speed, and thus an increase of from 50 to 100 miles an hour multiplies by four the risk and the destruction of life and property in case of accident. Since the dangers of railway travel increase as the square of the speed, and since absolute safety must be secured as nearly as possible, it is important to seek the causes of danger as well as the essentials to the attainment of high speed. If the train could be sent, at however great a velocity, along a perfectly straight and absolutely smooth track; if a complete absence of obstacles could be insured; if the engine and train could be so constructed that no accident could happen to the machinery or to

the sustaining wheels and their trucks; then, obviously, the speed would be limited only by the power of the machine The conditions of success are thus determined as much by the civil as by the mechanical engineer; as much by the builder of the railway as by the constructor of its machinery.

First, then, we must have an absolutely straight and smooth track. The roadbed must be so well ballasted, and so well made and drained, that the rails and the ties will not yield under the weight of the engine, or be washed away by floods. The rails must be so heavy and deep that they will preserve their line under the tremendous pressure of the engine wheels, remaining straight and in exact shape between the supporting ties and even at the junctions of abutting lengths. The rapidly-recurring blows which are heard on the train, as the wheels pass over rail after rail, at the junctions, must be eliminated, or at least rendered so light as to be harmless. Curves in the line of the road must be reduced wherever they can be, and where they are unavoidable they must be made as gradual and of as large a radius as circumstances will permit. Distances between stations and the number of stops *en route*, must be adjusted to make the former a maximum and the latter a minimum. "Grade crossings" should be avoided, and the track fenced in. Tracks should, if possible, be especially assigned to fast trains; all local passenger trains and all freight trains should be provided with independent tracks. Ample strength in all running parts, and free lubrication, should reduce to a minimum the danger of accident to wheels, axles, and the machinery of the engine.

From the study of these simple conditions, and in the endeavor to provide in this manner for the safe and speedy transmission of passengers, the weight of rails has already been raised to 100 pounds per yard; the roadbeds have become beautifully hard and smooth on our great railways; new forms of rail, new kinds of fish plates for connecting them, and new arrangements for supporting them, are continually displacing the old; while a thousand rejected or unused devices remain unknown except in the records of the Patent Office. The great transcontinental railroads are doubling and quadrupling their tracks, and through trains make few stops.

Safety against accident by the avoidance of grade crossings is as well provided for in Europe, perhaps, as is possible; but in this country we are criminally negligent, although the great main roads are rapidly improving in this direction. Our perils are made greater by the license taken in the name of "freedom" by our people, who recklessly walk on tracks or drive across them in front of a locomotive, in utter disregard of the danger to themselves and to the living freight carried by the trains. This, however, is partly due to the difficulty of realizing that an approaching train may be traversing a mile in one minute, a hundred yards in four seconds, a hundred feet in less than a second. The venturesome driver or the reckless pedestrian, feeling confident that he has ample time to get safely out of the way, may find himself surprised by the approaching juggernaut before he has had time to understand his situation.

The dangers of accident to the mechanism of the engine and train are reduced by skillful and prudent designing, and by careful choice of materials, united with good construction. Wheels and axles, when they have been in use for a certain length of time under passenger trucks, are transferred to freight trains, where accident, though still not likely to occur, would result in little or no loss of life and property. Steel is used for "running parts" in place of iron, which formerly was universally employed; rubbing parts and journals and their bearings are given the maximum practicable area and minimum loads; provisions for oiling them are made more and more effective; and every one of the myriad details of the machinery is better and better fitted to the common purpose. The result is a wonderful combination of celerity and safety in the operation of our fast trains; and it is vastly more safe to take up one's abode for a day in one of these modern vehicles, than to travel in the stage coach of our grandparents, or even to lean out of the window of a house.

We have built more than 150,000 miles of railway in the United States, and an equal amount gridirons the rest of the world; we have spent nearly $10,000,000,000 in this way, and Europe has laid out a large fraction of the same amount. We employ a million or more of people on our roads, and an unnumbered mass indirectly through their operation. We can

make steel rails that will last, under the heaviest wear, something like twenty years. We have attained a speed in regular traffic of 50 miles an hour, and in exceptional cases one of 60 miles; while now and then, in making up lost time, or in experimental or reckless driving, we have reached 80 miles an hour, and possibly more. At the same time, the dangers of travel are reduced to such a point that but one traveler in millions is killed, and any one individual must travel, on the average, 50,000,000 miles, or half as far as to the sun, to incur loss of life. If he confines his travels to New England, he must journey ten times as far, and must attain a greater age than Methusaleh, before he encounters a fatal accident. Of all lives lost, those of passengers constitute but a fraction, the majority of the killed being trespassers on the tracks and men employed in the more hazardous labor of the roads. The number of accidents has been enormously reduced by such improvements as the air brake, which enables the engineer to stop the train quickly, and by the introduction of the block system, which prevents a train from entering upon a section of the line until the preceding train has passed to the next section. The free use of the telegraph in this and in other work has much to do with the present safe operation of railways. The "ether-charged" wire binds together the whole system; giving the approaching train notice of a clear track; warning the most distant ones of sudden danger; telling them when and where to stop, to advance, to retreat, or to change to another track; and informing every official of every important fact and of every new order throughout the whole of the most elaborate and extended railway. The finger of the president and that of the superintendent are on every engineer, conductor, train master, and station agent; and the guiding eye, through the nerve of slender wire, becomes almost all-seeing, while the directing mind is all but omnipresent.

Having seen this marvelous progress, from the creeping trains of the time of George Stephenson to the "flyer" of to-day; from the rattling, uncomfortable motion which so impressed our fathers to the smooth, gliding, quiet sweep of modern trains; from 20 miles an hour in anxiety and discomfort to 60 miles in comfort, we ask: What obstacles prevent us from advancing, in

the next generation, to a speed of 100, or even to one of 200, miles an hour? Why may we not anticipate, at the same time, a degree of safety that shall as much surpass that of to-day as the safety of the best railways of our time exceeds that of the old stage coach? Such questions often seem absurd to the engineer, and are much more easily asked than answered; but the general reply may be given that the obstacle, for a long time to come, is likely to remain precisely what it is now, namely, a disproportionately small return on the capital required to insure conjoined speed and safety. Roads may be improved; rails may be made heavier, more rigid, more absolutely rectilinear; engines may be given more power, and may be adapted more precisely in their construction to higher speeds; still better materials, better design, more perfect workmanship, and more skillful operation may give increased immunity from accident. There seems to be no serious difficulty on the engineering side in securing and maintaining a speed of 100 miles an hour, or probably more; but the capitalist is here intimidated. Higher speeds cost money for initial and operative expenses in vastly higher ratio than either increase of speed or the returns to be expected on capital so invested. Our fastest trains do not directly pay, even now, when the wear and tear of engines, cars, roadbed, and bridges are considered. When the people want higher speeds, and need them so greatly as to be able and willing to pay for them, the engineers will construct, and the railroads will furnish, trains of still higher velocity and of still greater safety.

The attainment of 200 miles an hour, however, does not seem likely to prove practicable with the machinery of our day. At such a rate, the "head resistance" would be about 200 pounds per square foot of section of the train, or not far from ten tons in all. This, at the assumed speed, means the requirement from the engine of somewhere about 5,000 horse power. The other resistances to its motion would be probably as much more, at the very least, and the concentration of so much power in the locomotive would be considered impracticable by the majority of engineers. To reach such a speed, or anything approaching it, very probably the iron horse must be unharnessed and his task must be given to new forms of motor.

He could not attain such a velocity, even entirely without a load; far less could he draw a heavy train at such a speed. Were it practicable, even as a matter of construction and of invention, the engineer would be compelled to take the engine from the head of such a train on account of the relatively high and absolutely exorbitant cost of its own transportation. He could not afford to add superfluous weight to that of the train.

Thus the assumptions seem fair that the locomotive engine will have been superseded when we shall have doubled our speeds, and that we must find ways to utilize the weights of the cars themselves for adhesion, and to make each carry its own motor. This evidently points to electric traction, the only method as yet discovered of making the horse do his work without taxing us for his own carriage. I have very little question that, where railways are carrying large numbers of passengers on short routes, as on our systems of elevated road, the electric motor, or some advance on that marvel of invention and engineering, must come into use. Heat, light, and electricity will then conspire in that coming revolution which shall combine for us the speed of the bird, the comforts of home, and the safety of the dwelling. Through the action of such forces, steam will probably continue even then to "compel other devils," to "lengthen and shorten space" between cities and towns, and to create new and brilliant, though still evanescent, "foam bells along Thought's causing stream."

R. H. Thurston.

## CITY GROWTH AND PARTY POLITICS.

At the beginning of the present century, only six cities in the United States had populations exceeding 8,000. The largest city had not 75,000 inhabitants. The number of cities with more than 8,000 inhabitants had increased in 1860 to 141, in 1880 to 286, and in 1890 to 437. In 1800, only 4 per cent. of the inhabitants of the United States resided in cities having populations of 8,000 and upward. In 1860, 16 per cent. lived in cities of this size, in 1870, 20 per cent., and in 1880, 22½ per cent.

The result of the census of 1890 is not yet published officially; but from reports and estimates in the newspapers, and from semi-official data which I have received from the commissioner of the census, a very large increase of urban population appears during the last decade as compared with the rural population. More than 23 per cent. of the people of the United States now reside in cities having more than 8,000 inhabitants. From the data which I have indicated, the population of the United States for the year 1890 appears to be about 64,000,000, and the population of cities having more than 8,000 inhabitants amounts to nearly 18,000,000. The increase of urban population during the last decade has been about 6,500,000, showing that nearly half the increase of the whole population has been in cities of this size. If we should include in the urban population cities of 4,000 inhabitants and upward, the proportion of urban to rural population would be vastly increased. But confining urban population to cities of 8,000 inhabitants and upward, the aggregate increase of population in many of the States of the Union, as will appear by the census of 1890, is due in a large measure to the increase of population in the cities. The following will serve as examples.

In the State of Maine the total increase of population between 1880 and 1890 was only 11,325, while the increase in its cities was 14,290; showing that the population of the rural districts

and of cities containing less than 8,000 inhabitants actually decreased during the decade, while the increase of population in cities containing more than that number of people was more than 12 per cent. In Massachusetts the total increase in population between 1880 and 1890 slightly exceeded 400,000, and 250,000 of this increase was in cities of 8,000 inhabitants and upward. In the State of Connecticut, during the same period, the aggregate increase of population was about 110,000, while the increase in cities of 8,000 inhabitants and upward was nearly 105,000; showing that nearly the total increase was in cities of this size. The increase of urban population in that State during the last decade was nearly 40 per cent. In Rhode Island the total increase of population was about 69,000, while the increase in the cities was 49,000. In New York State, during this period, the total increase of population, as first reported by the census office, was 1,016,000, while the increase in the cities of 8,000 inhabitants and upward was 763,000, being more than three fourths of the total increase. It also appears that 53 per cent. of the population of the State of New York reside in cities of 8,000 inhabitants and upward. The increase of the urban population in that State was more than 28 per cent. In the State of Pennsylvania nearly one half of the total increase of population was in the cities, which show an increase of more than 33 per cent. In Ohio the increase of the urban population was more than 37 per cent., being more than one half of the total increase of the State. In Indiana the increase of urban population was 52 per cent. In Illinois the total increase of population exceeded 740,000, and the increase of urban population was 93 per cent., or more than 700,000, being only 40,000 less than the whole increase in the State. In Iowa the increase of urban population was more than 63 per cent. In Michigan it was 70 per cent., in Wisconsin 77 per cent., in Nebraska 32 per cent., in California 46 per cent., in Tennessee 104 per cent., in Alabama 74 per cent., and in Colorado 169 per cent.

The population of the United States has increased between 1880 and 1890 from 50,000,000 to 64,000,000, or about 26 per cent. Deducting the urban population, the increase of rural population is found to be only 8 per cent., while the increase of the

urban population is more than 57 per cent. This classification of urban population, as before, includes only cities of 8,000 inhabitants and upward. If the classification should embrace cities of 4,000 inhabitants and upward, it would undoubtedly appear that the rural population had decreased during the decade. This general result has been brought about notwithstanding the immense increase of population in the rural districts of extreme western States, such as the Dakotas, Minnesota, Nebraska, Kansas, Arkansas, and Texas.

The unequal growth of urban and rural populations is not the result of accident. The causes which have produced it are various, but the principal reason is that the business which is conducted in the cities has been more prosperous and more remunerative than that of the country. Farming has not kept pace in development and prosperity with manufacturing, and with other industries of the cities. That there is at this time serious and wide-spread depression in agriculture, is universally conceded. The census of 1890, as compared with that of 1880, conclusively demonstrates this fact. When the details of the new census have been published, we shall see that in all the eastern and middle States the values of farms have depreciated nearly, if not quite, one half, during the past decade. The commissioner of agriculture and immigration of New Hampshire recently reported 1,442 vacant or abandoned farms, with tenantable buildings, in various parts of that State.

I do not purpose at this time to point out the causes of agricultural depression; but it may not be out of place to remind the reader that this has not been prevented by the high protective tariff laws, which were enacted, and have been maintained for more than a quarter of a century, on the assurance that they would produce universal prosperity, and that they would especially promote the interests of agriculture. Negatively speaking, then, we may state, without fear of contradiction, that protective tariffs have not secured prosperity to the farmers of the country. However great may have been the success of those engaged in manufacturing industries, the farmers cannot be said to have shared it.

The large increase of urban population will have an impor-

tant bearing upon the future of political parties. The majority of the large cities of the country are democratic; the cities are interested in commerce, and they depend upon it in large measure for their prosperity. The freer commerce is, the greater will be the welfare of cities. The legislation of the present Congress, embodied in the McKinley bill, has for its object the restriction of foreign trade. Many of the rates proposed in that bill are prohibitory. The effect upon New York and other seaport cities will be detrimental, and the practical working of the measure will provoke increased opposition to the political party which is responsible for it. In cities where manufacturing is the principal industry, the employees in factories are rapidly learning that protective tariffs do not protect them. In the States of New Jersey and Connecticut, and in the city of New York, where manufacturing is carried on to as great an extent as in any other localities in the United States, the Democratic Party was successful in the presidential contest of 1888, when the tariff question was the principal issue. Since that time the State of Rhode Island, in which manufacturing is the chief industry, has repudiated the party of protection. In the cities of Boston, Chicago, and Milwaukee, too, where manufacturing constitutes one of the chief sources of wealth, the trend of political sentiment is opposed to the Republican Party. The question of prohibition is becoming more important every year. There is, perhaps, not a city in the United States with 8,000 inhabitants in which prohibition laws can be successfully enforced. It is well known that in the large cities of the prohibition States the enforcement of laws against the sale of liquors is impossible. The party that opposes prohibition in such cities, and that favors stringent license laws, will generally have the ascendency therein.

Upon present political issues, therefore, the new apportionments, under the census of 1890, will place the Democratic Party in more favorable conditions for success in future Congresses and State Legislatures. If the apportionment for representatives in Congress shall be made, under the census of 1890, so as to secure the same number of members that the present House contains, each of the States of the Union will have the same number of members as during the last decade, except that Arkansas,

Colorado, Kansas, New Jersey, and Texas will each gain one member, Nebraska two, and Minnesota three, and that Indiana, Kentucky, Virginia, South Carolina, Maine, and Tennessee will each lose one member, and New York and Ohio each two. Nine of these members gained are in States west of the Wabash, Ohio, and Mississippi Rivers, and there is a net loss of nine members east of those rivers. There is also a gain in favor of the West of eight members in the six new States. The loss of two members in the State of New York will be from the rural districts, and the probabilities are that other members now elected by the rural population will be transferred to city districts. The State of Illinois will retain the same number of members that it now has; but Cook County, which includes the city of Chicago, will be entitled to at least two additional members. The rural districts must, therefore, lose two, and there will be similar losses throughout the country. Thus it is evident that a much larger number of representatives in Congress than heretofore must be chosen from districts which are entirely within the limits of cities, or from those in which urban population will predominate. Congress determines only the number of representatives to which each State is entitled. The Legislature of each State must apportion these representatives to districts of as nearly equal population as possible. In the new apportionments the inhabitants of cities must be recognized, and the effect of the increased population will then become apparent. The rural districts will sustain a loss of representation; the number of city members will be largely increased.

But the most remarkable political advantage which the cities will realize by reason of their greater increase of population, will be in the legislative apportionments. In all the States of the Union, with one or two exceptions, the representation in the Legislatures is based on population. New apportionments are required every ten years, based upon the population as shown by the federal census. The State Legislatures, at their next sessions, will thus be required to divide their respective States into senatorial and assembly districts, based upon the census of 1890. In nearly all the States, especially those east of the Mississippi River, the cities during the ensuing decade will have much

greater representation in the State Legislatures than they had during the past decade. The importance of increased representation for the cities in State Legislatures will be manifested in a variety of ways, but to the country at large the effect which may be produced in the election of the United States senators will be of the greatest importance. If, as is assumed, the cities of the country are generally in accord with the Democratic Party, the increased representation they will have during the next decade will undoubtedly cause an increased representation of that party in the United States Senate.

The fact that the rural population has not kept pace with that of the cities, and that rural industries seem to languish as compared with those of the cities, may serve to arouse the farmers of the country to a realization of their true condition, and of the causes which have produced it. If they shall learn the effect upon them of a tariff for protection, they will find that it protects the manufacturer only. There is nothing good in it, as a rule, for them. They are compelled to sell their products, whether in the home market or in the foreign market, at prices fixed in Liverpool, the cheapest free-trade market in the world. Every manufactured article they buy must be bought at prices fixed in the protected market of the United States, which is the dearest, as to such articles, in the world. This reduces the purchasing power of farm products, when exchanged for such articles, nearly, if not quite, one half. Such a system will, in the end, bring bankruptcy to all who are the victims of it. But if the present agricultural depression shall serve as an object lesson to teach farmers that protection does not protect them, it may prove a blessing in disguise. In any event, however, the loss of representation of agricultural districts in the State and national governments will be deplored by all who regard the sturdy manhood and unswerving patriotism of the yeomanry of the country as the surest guarantee of the perpetuity of our free institutions.

WILLIAM M. SPRINGER.